CamVu 500 Minidome

Installation and Operation Manual

DM/CMVUD500

DM/CMVUD500/N

NetVu CONNECTED

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Introduction

The CamVu500 Mini-dome is the latest addition to Dedicated Micros range of CamVu IP Cameras. Providing excellent low light, performance the CamVu500 Mini-dome can transmit and record images in real-time and is designed for Dedicated Micros next generation of video surveillance - Closed IPTV.

EXCELLENT LOW LIGHT PERFORMANCE

The CamVu500 uses a 1/4" CMOS progressive scan sensor that provides exceptional low light resolution (<0.3 lux, @ F1.2). This incredible performance allows colour images to be produced in dimly lit scenes.

ANALYTICS*CAPABLE*

As part of our growing range of **Analytics***Capable products, the CamVu720 Series is able to contain the latest analytics solutions from Dedicated Micros including Object Left/Removed Detection Tripwire and Counting Tripwire, all locally hosted on the camera.*

NETVU CONNECTED

With NetVu Connected products users can seamlessly integrate Video Servers, Cameras & Domes, Management Systems, mobile viewing devices and video walls together without the costly impact of significant integration time. A shared user interface helps minimise operator training whilst powerful features such as Direct configuration of PTZ Cameras and Domes from connected DVRs helps reduce installation time providing benefits to both end user and installer/integrator.

The incredible flexibility of Dedicated Micros NetVu Connected platform enables multi-environment security installations to be achieved with ease. Integration of Fixed and Mobile DVRs and Video Servers alongside products such as FireVu (for Video Smoke Detection) enable large scale solutions with several application requirements to be designed and built with ease.

MULTIPLE, SIMULTANEOUS VIDEO STREAMS

Dedicated Micros' unique Visual Signal Processor (ViSP) allows the CamVu 500 to transmit multiple simultaneous MPEG-4, H.264 and/ or JPEG images to any number of associated NetVu Connected devices for image viewing. Each stream can be tailored to suit the viewer's bandwidth requirements.

CLOSED IPTV

Dedicated Micros' award winning Closed IPTV solution combines open standard IP protocols with patent pending innovation to provide simple to install, safe and secure IP video solutions across new or existing networks.

Automatically allocating IP addresses to IP cameras by physical port, a Closed IPTV system is completely deterministic, creating firewalls and monitoring point-to-point IP connections so they cannot be hacked or intercepted. Critical to the security of a Closed IPTV system is the unique implementation of Trusted Endpoint technology; a secret signature, applied at lock down, enables endpoint devices such as IP cameras to be secure, immediately triggering a security alert should any interference be detected.

This ground breaking solution provides a very simple and secure answer to IP video, meaning that no prior knowledge of IP networking is required. Sophisticated and Dependable network security can be achieved with a single click.

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Features

- Colour IP Mini-dome with excellent low light sensitivity
- Integrated Camera Recording and full enterprise video server within camera
- 0.3 lux F1.2
- Can form part of a Closed IPTV system
- Transmission of multiple, simultaneous video streams in MPEG-4, H.264 and JPEG format enables multiple users to view video streams at the settings they require
- AnalyticsCapable - enables analytics solutions to be deployed on your CCTV system
- Direct configuration from any compatible NetVu Connected DVR or Video Server
- MultiMode Recording - Dynamically-switchable resolution, record-rate & compression (MPEG-4/H.264/JPEG) settings
- Web server for remote configuration of camera features
- Power over Ethernet (PoE)
- Local analogue test monitor output for use when positioning and adjusting the camera's field of view and focus
- Uses the latest Chipwrights ViSP to minimise power consumption and heat build up

Benefits

- The camera supports recording to local SD card or network attached storage using ATA over Ethernet
- The latest technology provides low light performance superb image quality and colour fidelity in variable and high contrast lighting conditions.
- Operates seamlessly within a NetVu Connected network.
- Remote configuration removes the need for multiple revisits
- Images recorded locally on the camera in JPEG format can be viewed over low bandwidth networks using MPEG-4
- Video output allows local lens adjustment and display of the unit's network settings on a service monitor

Models

DM/CMVUD500	¼" 480p IP indoor dome 2.8-10mm, PoE, 0.2 lux
DM/CMVUD500/N	¼" 480p IP indoor dome 2.8-10mm PoE, 0.2 lux, NTSC

Components Supplied

Before installing unit, please verify that all items listed below have been supplied:

1 x CamVu Camera

1 x POE Injector Cable

1 x User Guide

1 x CD containing information for use with the camera

Note: *If powering the unit over PoE using the supplied injector, a 48Vdc PSU that can supply 15W is required - DM/PSU/48V can be purchased separately from Dedicated Micros.*

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CE NOTICE (EUROPEAN UNION)

This section contains the regulatory declarations for the EU for the Camera.

CE

This product is marked with the CE symbol and indicates compliance with all applicable Directives.
A “Declaration of Conformity” is held at Dedicated Micros Ltd, 1200 Daresbury Park, Daresbury, Cheshire WA4 4HS http://www.dedicatedmicros.com

Hereby, Dedicated Micros LTD, declares that this Unit Camera is in compliance with the essential requirements and other relevant provisions of Directive 95/5/EC.

Marking by the symbol CE indicates compliance of this Dedicated Micros product to the Electromagnetic Compatibility Directive 89/336/EEC, and the Low Voltage Directive 73/23/EEC of the European Union. Such marking is indicative that this system meets the following technical standards

- EN 61000-6-3 EMC Standard Residential, Commercial and Light Industry.
- EN 62000-3-3 Limitations of voltage changes, fluctuations and flicker in public low-voltage supply systems for equipment with rated current up to 16A.
- EN 61000-3-2 Limits for harmonic current emissions for equipment with rated current up to 16A.
- EN 50130-4 Immunity requirements for components of fire, intruder and social alarm systems.
- EN 60950 Safety of IT and similar equipment.
- EN 55022 Class A. Radiated Emissions Standard, suitable for Commercial or Residential use

Further details about these applicable standards can be obtained from Dedicated Micros Ltd., 1200 Daresbury Park, Daresbury, Cheshire WA4 4HS

RF Interference warning

This is a class A product. In a domestic environment this product may cause radio frequency interference, in which case the user may be required to take adequate measures.

Canadian EMC statement

This product is compliant with Class A ICES-003

Note: *This Class A product meets the requirements of the Canadian Interference causing equipment regulations. Cet appareil numerique de la Classe A, respect toutes les exigencies du reglement sur le materiel brouilleur du Canada.*

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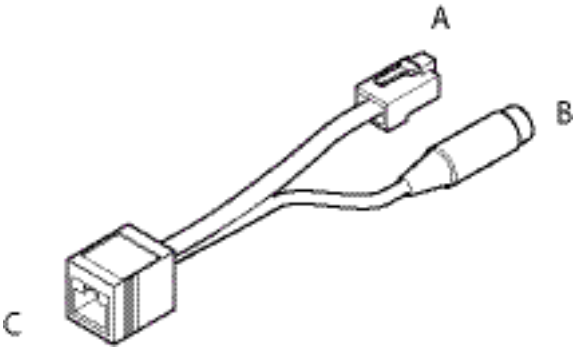
POE Injector Cable

The POE Injector cable is designed to enable the use of POE (Power over Ethernet) before a POE capable switch has been installed. It is installed alongside a suitable 48Vdc PSU that can supply 15W is required - DM/PSU/48V can be purchased separately from Dedicated Micros.



A Connection to DVR/NVR/Layer 3 Enhanced CCTV Switch

B Connection to suitable 48Vdc 15W PSU - (DM/PSU/48V)

C Ethernet cable connection to camera.

Important: *48V is supplied to connection C. There is no voltage at Connection A. Do NOT connect an ethernet cable from connection C to the DVR/Layer 3 Enhanced CCTV Switch as this could cause irreparable damage.*

POE Injector Power Supply specification

Adaptor socket - 5.5mm diameter with a 2.1mm central circular pin

+48V goes to the centre pin of the power connector - 0V to the outside barrel

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Important Safeguards

Product Safety

WARNING

- Installation and servicing is only to be carried out by suitably qualified and experienced personnel.
- Do not remove covers as there is a risk of injury or death by electric shock.
- Only power low voltage dome cameras from a class 2 isolated power supply.

This camera range is designed for use in general purpose CCTV applications and has no other purpose.

Only operate your camera between the temperatures of -10°C and +50°C. Do not operate your camera outside its specified power supply range.

Electromagnetic Compatability (EMC)

CAUTION

This product is intended solely for use in general CCTV applications.

The product must be installed and maintained in accordance with good installation practice to enable the product to function as intended and to prevent problems. Refer to your agent for installation guidance.

Declaration of Conformity

The manufacturer declares that the equipment supplied with this manual is compliant with the essential protection requirements of the EMC directive 89/336 and the Low Voltage Directive LVD 73/23 EEC.

Conforming to the requirements of standards EN55022 for emissions, EN61000-4 parts 2, 3, 4, 5, 6 and 11 for immunity and EN60950 for Electrical Equipment safety.

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FCC CLASS B REGULATORY NOTICE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a different circuit different to the receiver.

Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

Read Instructions

All the safety and operating instructions should be read before the unit is operated and adhered to during operation. These instructions should be retained with the unit, and all warnings and cautions contained should be heeded.

Power Sources

This unit should be operated only from the type of power source indicated on the manufacturer's label.

Power Over Ethernet

This product supports POE and when connected to a suitable switch, will not require an external PSU to drive the device (Bridge and end-span compatible).

Servicing and Repair

Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards.

Refer all servicing and repair to qualified service personnel.

Equipment

Use only attachments/accessories specified by the manufacturer.

Ventilation

Ensure unit is properly ventilated to protect from overheating.

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Installation

The dome camera can be mounted in two ways: ceiling mount for installation into a tile ceiling; surface mount for installation directly to a hard surface or mounting structure.

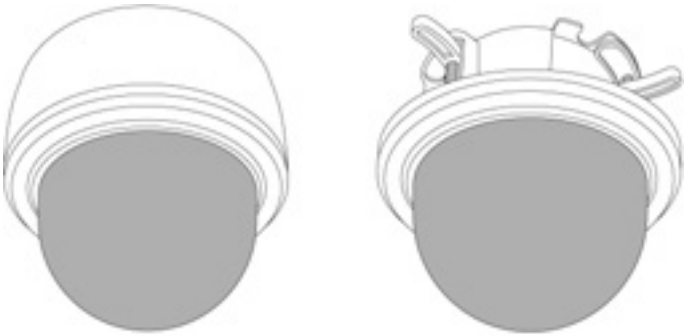
Parts Supplied

- 2 x Plastic anchors
- 2 x 80 mm (3”) screws

Parts Not Supplied

- Optional video service lead (part number DM/ICED-SERV)

Surface Mount Ceiling Mount



Surface Mount Installation

Refer to the Quickstart section for more information.

1. To remove the dome cover, rotate it counter-clockwise and gently pull it away from the camera body. The inner liner can now be removed.
2. Using the template supplied at the rear of this manual, mark and drill the holes required for fixing. Using the two 80 mm mounting screws, attach the dome camera to the surface as shown. Do not over tighten the fixing screws. The screws can be used on their own if the surface is of a suitable material (e.g. wood), but plastic anchors must be used where the surface is of brick or masonry construction. Run the ethernet cable to the camera. Cable may be fed through the ceiling or through the cutout in the side of the camera shroud. Remove the cutout with a sharp knife and use a round file to smooth the edges if necessary.
3. Connect the ethernet cable to the RJ45 socket on the mainboard. If the camera is connected to a switch that is not POE capable, refer to ‘POE Injector Cable‘ and install the POE injector cable as described.

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Recess Mount Installation

Refer to the Quickstart section for more information.

1 To recess mount the camera, the shroud must be removed. Gently squeeze together opposite sides of the shroud as shown and lift it away from the camera body.

2 Using the template supplied at the rear of this manual, mark and cut a 4” (100 mm) diameter hole. A suitably sized hole saw can also be used.

To prepare for installation use a suitable screwdriver to loosen the three fixing clamps sufficiently to accommodate the thickness of the tile or ceiling.

3 Connect the ethernet cable to the RJ45 socket on the mainboard. If the camera is connected to a switch that is not POE capable, refer to ‘POE Injector Cable ‘ and install the POE injector cable as described.

4 Insert the camera into the hole. Using a suitable screwdriver, tighten the three fixing clamps as shown. Do not overtighten the clamps.

Camera Adjustment

Camera Position

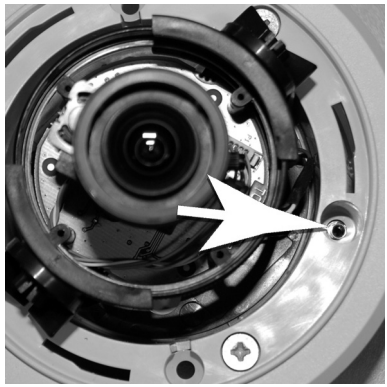
The camera assembly is adjustable in all three axes. Adjust the camera until it is pointing in the desired direction.

FOV & Focus

Use the levers on the varifocal lens to adjust the camera’s field of view, and focus.

Local Video Out

Provision is made for the connection of a local video monitor to assist in setting up the camera. Use the optional service connector DM/ICED-SERV (not supplied).



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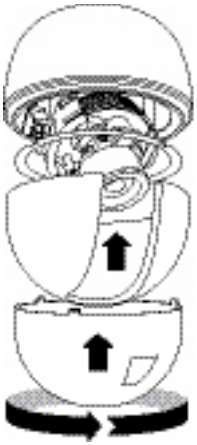
Final Assy

When all the connections and adjustments have been made, re-attach the camera liner and dome cover.



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Configuring the Unit

Using the Unit with Secure Closed IPTV

1) Connect the camera to a Closed IP Network switch using Cat5 network cable. The POE version of this camera will draw power from with the DM/NSW/CPP model switch, or with DM/NSW/CP model switch if connected to a POE injector and separate power supply.

2) Ensure that the Closed IP NVR or Console that the switch is connected to is in Configuration mode to allow new cameras connect.

3) Power up the camera and wait for the on-screen acknowledgement on the monitor attached to the Closed IP NVR or Console. Alternatively check the Camera Overview web page on the Closed IP NVR or Console to determine out the camera status.

4) Once the camera has been detected and added, remember to secure the switch by moving out of Configuration mode, failure to do this will leave the Closed IPTV system unsecured.

Locating the Unit IP address

The unit is configured using on-board webpages. This can be done remotely once the unit has been installed in its chosen location, using the web browser on a PC in the same subnet as the unit.

The unit configuration pages can be accessed using the unit IP address or DNS name. The unit has DHCP factory enabled. When the unit is connected to a DHCP network for the first time, an IP address is automatically assigned by the network switch or router it is connected to. Most routers will have the facility to enable DHCP and DNS, if it is not available, contact your network administrator.

The default DNS address for each unit is factory set as the serial number. This address can be found on the serial label on the unit or via the packaging the unit came in.

If DHCP and DNS are not available, the IP address can be found by connecting an analogue monitor to the BNC connection of the camera. The unit IP address is displayed on the analogue video output for 10 minutes from powering the unit on.

The DNS or IP address can be typed directly into the address bar of a web browser.

Note: *The unit's DNS address can be changed subsequently to something more memorable or meaningful than its serial number by editing the System name option in the System configuration page.*

Zero_conf configuration

If a permanent IP address is not assigned to the unit, it will attempt to contact the DHCP server every time it starts up, and periodically thereafter. The unit support zero-configuration networking (sometimes known as Bonjour), this enables automatic discovery of computers, devices, and services on IP networks. Zero-configuration uses industry standard IP protocols to allow devices to automatically discover each other without the need to enter IP addresses or configure DNS servers. By loading a suitable free add-on to your web browser such as Bonjour for Windows for Internet Explorer or BonjourFoxy for FireFox zero configuration devices such as this unit can easily be discovered and accessed.

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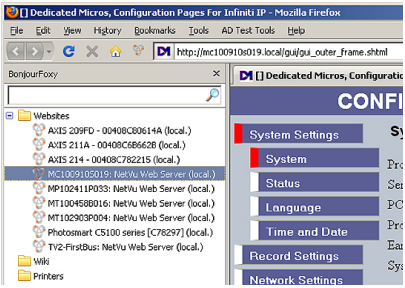
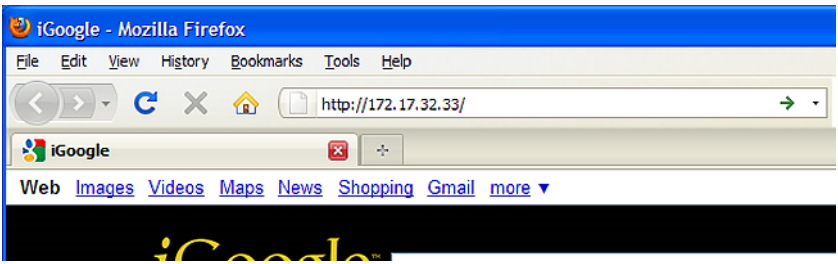


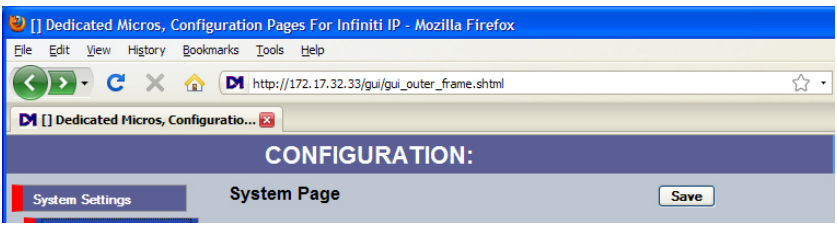
Accessing the Configuration Pages

The unit is configured using the on-board configuration pages. To access these:

1. Launch a web browser, preferably on a PC on the same subnet as the unit.
2. Type the IP address (or DNS name if there is no fixed IP address) of the unit into the address bar.



3. If prompted, enter a username and password. The default settings are; username:dm and password:web.
4. The Main Menu page will be displayed.



The configuration menus are accessible via the link on the left hand side of the page..

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System Settings

The menus under the System Settings heading allow the unit's core settings to be viewed, changed and the system software upgraded.

The Attributes option displays details about the unit including the IP address, unit serial number, MAC address and software version.

The Status page displays information about the unit's operating condition, shows how long the unit has been operating and the reason for the last reset. It also shows the camera status.

The Language page allows the system language to be set. The language can also be changed for the current session only.

The Time and Date page allows the unit time and date settings to be adjusted, including setting the timezone.

The Features page allows control of the different features that are available within the software including Email reporting and control of the display resolution.

The Maintain page allows the current configuration to be saved, and for previously saved settings to be loaded.

The PowerScript management pages allows individual PowerScripts to be disabled if required.

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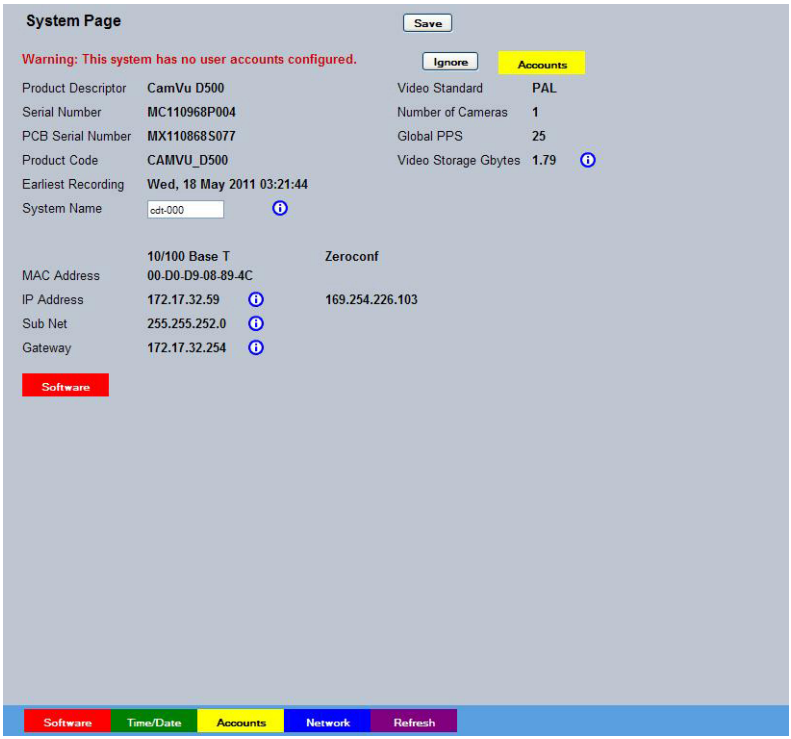
Attributes

This menu shows the general information about the unit including the version of software installed, the unit's serial number and the allocated DHCP IP address.

The system will display a warning if user accounts have not been set up. These can be eliminated by setting up accounts in 'Display->User Accounts'.



Product Descriptor	Details the product model.
Serial Number	Identifies the serial number of the specific unit.
PCB Serial Number	Displays the PCB (Printed Circuit Board) serial number of the unit.
Product Code	Displays a code identifying the unit's specification.
Earliest Recording	Displays the date/time of the earliest recording held on the unit.
System Name	This field can be edited to allocate a name to the unit, which can be typed directly into a browser to access the configuration pages. This is displayed when the unit is accessed via NetVu ObserVer and is sent when transmitting information to a Remote Video Response Centres (RVRC).
MAC Address	This is the MAC address assigned to the unit.
IP Address	This is the IP address allocated to the unit.
Sub Net	This is the subnet mask for the unit
Gateway	This is the IP address of the default gateway (router) assigned by the

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	DHCP server.
Number of Cameras	Shows the number of camera channels on the unit i.e 1
Global PPS	Details the unit Global PPS (Pictures Per Second) recording rate.
Video Storage Gbytes	Highlights the available video storage capacity in Gigabytes.
Video Standard	Displays the video standard adopted by the unit i.e. PAL, NTSC.
Software (Red)	Links to the System Settings->Software details page
Time/Date (Green)	Links to the System->Time and Date page
Accounts (Yellow)	Links to the Viewer Settings->User Accounts details page
Network (Blue)	Links to the Network Settings->Network details page
Refresh (Purple)	Refreshes the current page

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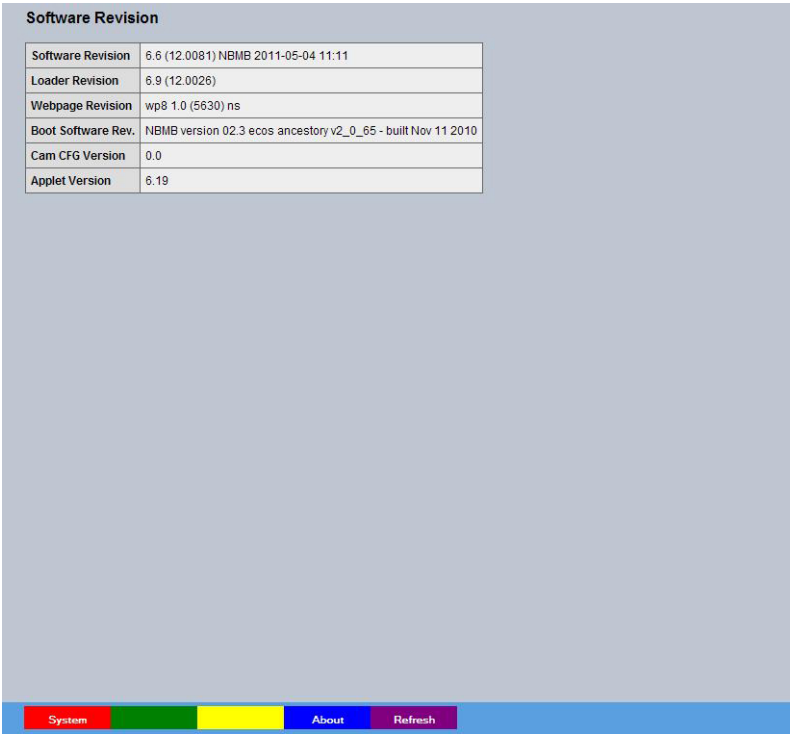
Software

This page details the installed software and may be needed if calling Technical Support.



System (Red)	Links back to the System Settings page
Diagnostics (Blue)	Opens the *Status->Diagnostics* page.
Refresh (Purple)	Refreshes the current page

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Status

Unit Status

This menu details information regarding the status of the unit, including the total time the unit has been operating and the time since its last reset.

Time since last reset	Details the time since the unit was last reset.
Total running time	Details the total time the unit has been operational.
Reset code	The last reset code used is displayed.
Restart reason	The reason for the last restart is displayed i.e. Controlled User Reset.
Refresh (Purple)	Refreshes the current page

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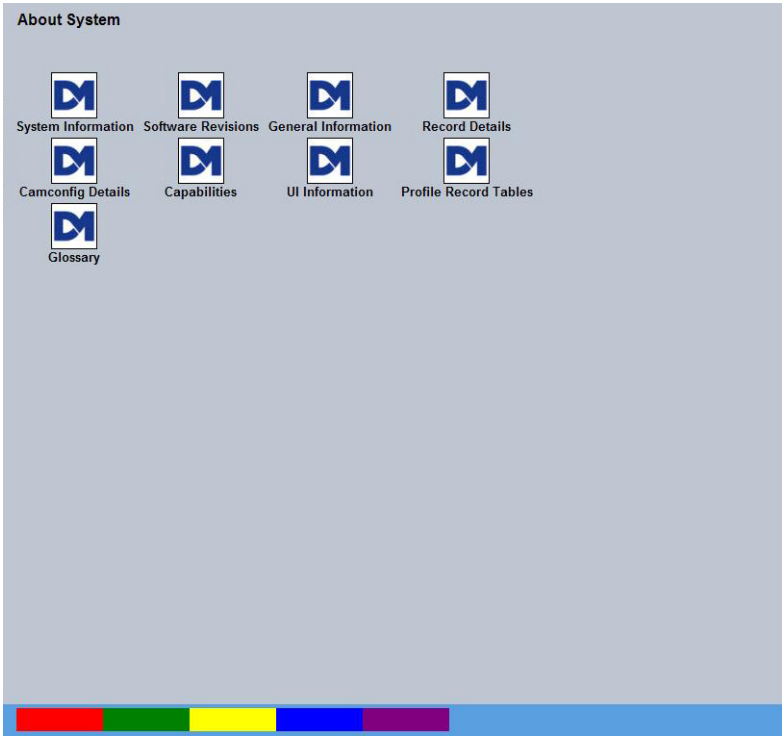
About

This page provides quick links to the pages required to fault find.



System Information	Opens the *System Settings->System* page.
Software Revisions	Opens the *System Settings->Software* page.
General Information	Opens the *General Information* page (refer to *'Appendix A - General Information'*).
Record Details	Opens the *Record Details* page (refer to *'Appendix A - Record Details'*).
Camconfig Details	Opens the *Camconfig Details* page (refer to *'Appendix A - Camconfig Details'*).
Capabilities	Opens the *Capabilities Details* page (refer to *'Appendix A - Capabilities Details'*).
UI Information	Opens the *UI Information* page (refer to *'Appendix A - UI Information'*).
Profile Record Tables	Opens the *Profile Record Tables* page (refer to *'Profile Record'*).

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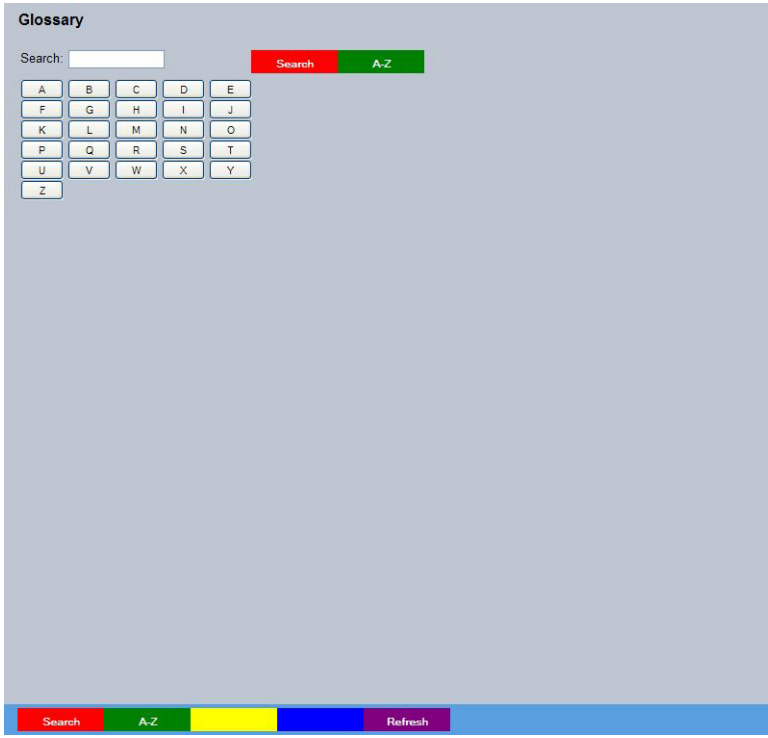
Glossary

This page provides quick reference to the technical terms used throughout the manuals and on the configuration pages, and allows alphabetical indexing and free text searching.



Search (Red)	Enter text into the search box and then click this button to find all related terms.
A-Z (Green)	Activates the letter selection buttons allowing all subjects within a selected index letter to be displayed. Previous (Yellow) and Subsequent (Blue) letters can then be selected and displayed
Refresh (Purple)	Refreshes the current page

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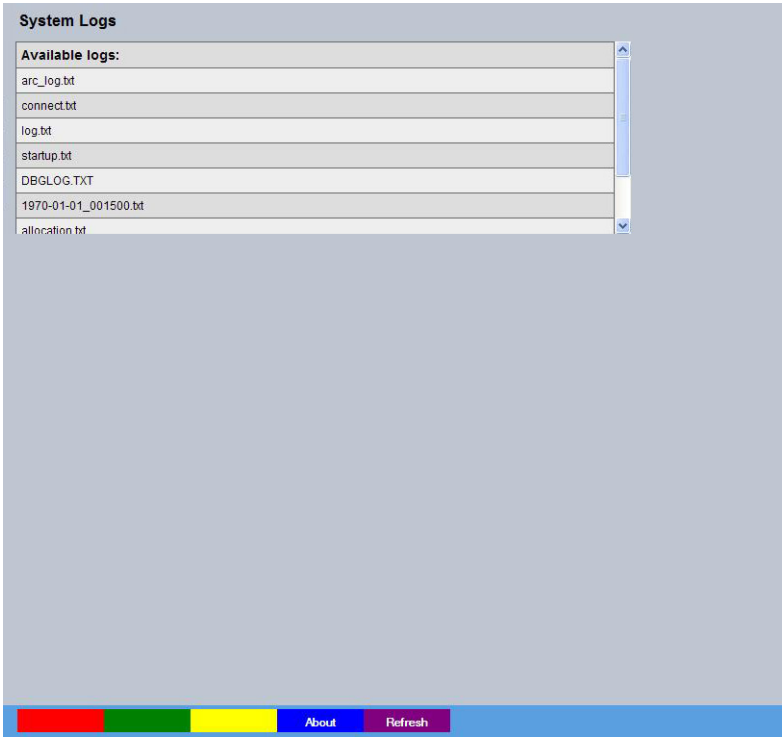
Logs

The log files stored in the camera can be accessed from this page. Selected logs are displayed on the page below.



About (Blue)	Opens the *About* page
Refresh (Purple)	Refreshes the current page

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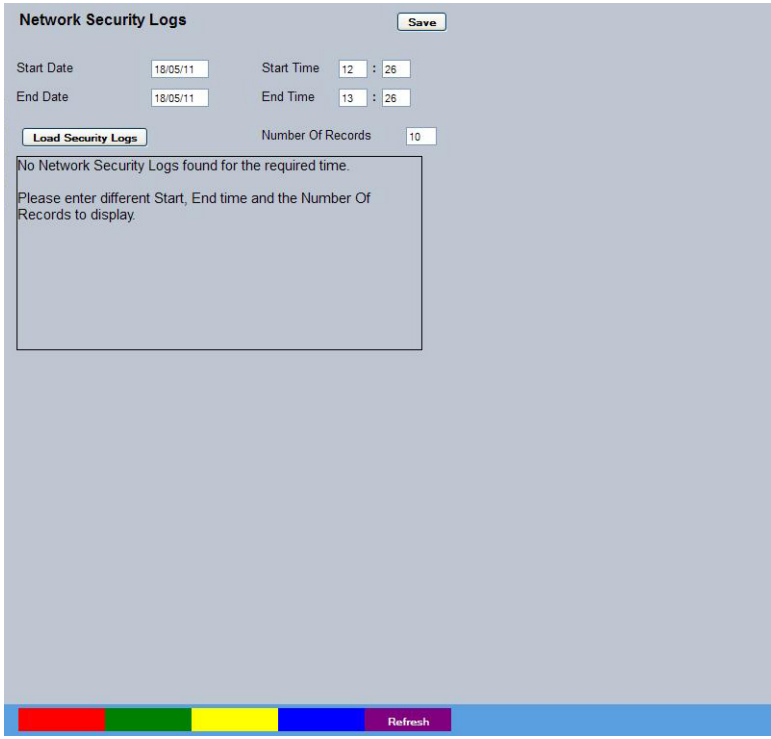
Security Logs

The network security logs, which show details of attempted intrusions over the network between the configured dates and times, can be displayed on this page.



Refresh (Purple)	Refreshes the information on the current page.

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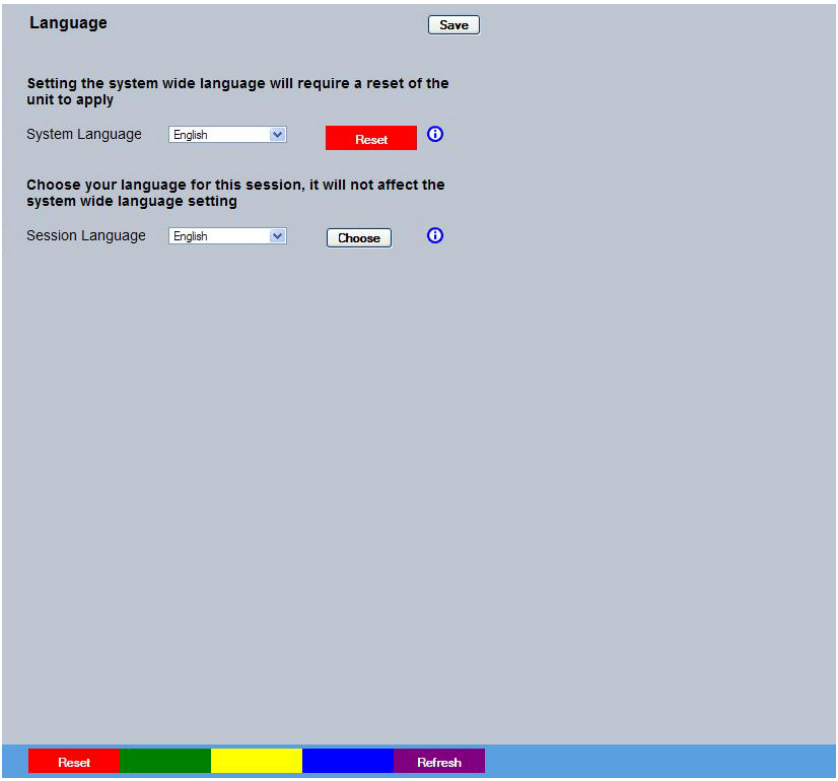
Language

This menu allows the system language to be set. Changing the System Language will effect all menu pages. If required, the language can also be changed for the current session only.



System Language	Select to change the system language setting.
Note:	*A server reboot will be required to implement system language changes. The unit can be rebooted via System Settings->Maintain->Reset, or by pressing 'Red' while on this page.*
Session Language	Select to change the language settings for the current session only.
Choose	Select to immediately activate session language changes.
Reset (Red)	Resets the unit
Refresh (Purple)	Refreshes the current page

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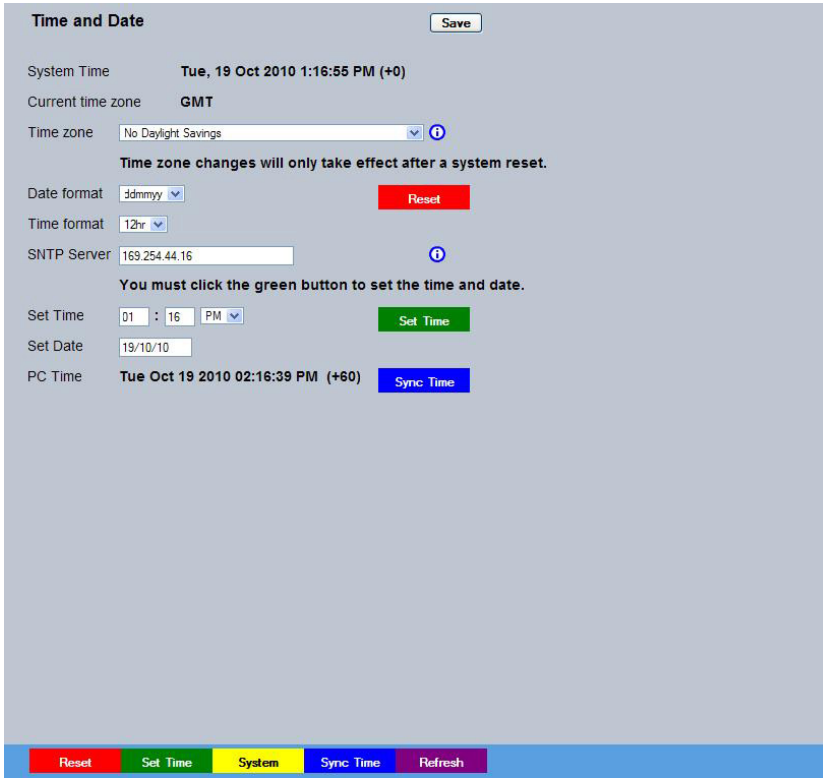
Time and Date



System Time	The current system time and date is displayed.
Current Time Zone	Displays the currently selected time zone settings.
Time Zone	Select the relevant timezone offset from the accompanying drop down menu.
Date Format	As default, the date is entered dd/mm/yy. It can also be displayed as mm/dd/yy or yy/mm/dd.
Reset (Red)	Resets the unit
Time Format	As default, the time displayed is in 12 hour format. This can be changed to 24 hour if required.
SNTP Server	A Simple Network Time Protocol (SNTP) server allows external devices to connect and set their current date and time settings to that of the SNTP. If required, enter the SNTP server IP address here.
Set Time	Allows current unit time to be updated.
Set Time (Green)	Applies the new time.
Set Date	Allows current unit date to be updated.
PC Time	Displays the system time of the PC currently being used to view the webpages.

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Sync Time (Blue)	Use this button to synchronise the time of the unit to that of the PC being used to view the webpages.

Note: *The PC Time and Sync Time options will only be available if viewing the menu via the webpages.*

System (Yellow)	Opens the *System Settings->System* page
Refresh (Purple)	Refreshes the current page

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Features

This menu enables the activation of system features such as Email Reporting.

System (Red)	Opens the *System Features* page
Network (Green)	Opens the *System Features Network* page *(below)*
Video (Yellow)	Opens the *System Features Video* page *(below)*
Other (Blue)	Opens the *System Features Other* page *(below)*
Refresh (Purple)	Refreshes the current page

System Features

User Logging	Enable this option to activate User Logging, refer to 'Appendix A' for further information regarding the User Logging function.
Text in Images	Select this option to activate the Text in Images function, refer to 'Analytics & Text-Text In Image' for more information.

Note: *When de-selected here, the 'Text in Image' menu will no longer be displayed in the menu tree.*

Email Reporting	Select this option to activate the Email Reporting function, refer to 'Network Settings-E-mail' for more information.

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Note: *When de-selected here, the 'Email Reporting' menu will no longer be displayed in the menu tree.*

Remote Reporting	Select this option to activate the Remote Reporting function, refer to 'Network Settings-Remote Reporting' for more information.

Note: *When de-selected here, the 'Remote Reporting' menu will no longer be displayed in the menu tree.*

Automatic FTP Download	Select this option to enable automatic FTP downloads to upgrade the unit and/or the webpages, *refer to 'Network->FTP Download' for more information*.

Note: *When de-selected here, the 'Automatic FTP Download' menu will no longer be displayed in the menu tree.*

Webcam Support	Select this option to activate the Webcam function. This allows the unit to emulate a webcam and send image from one video feed in webcam format, refer to 'Network Settings->Web Cam' for more information.

Note: *When de-selected here, the 'Web Cam' menu will no longer be displayed in the menu tree.*

SMB Server Support	Select this option to activate the SMB (Server Message Block) file sharing function. When activated, the SMB protocol allows the unit to access PCs operating the Windows operating system (and Linux machines running Samba). This enables sharing of files and directories to/from the unit. The name of the SMB Workgroup on the network must be correctly entered in the SMB Workgroup option (see below). It is important that the Server Name assigned to the unit via 'Network Settings->Server Name' is unique within the workgroup being used. To access the unit via a PC running SMB (and has access to the same Workgroup); open My Network Places-Entire Network- Microsoft Windows Network. The Workgroup containing the unit and PC(s) should then be available. Files and folders can then be copied/added as required.
Camera Masking	Select this option to activate the Camera Masking function, refer to ' Alarm Settings-Masked Cam Detection' for more information.

Note: *When de-selected here, the 'Masked Camera Detection' menu will no longer be displayed in the menu tree. Camera Masking*

System (Red)	Select to open the System->Features->System page
Network (Green)	Select to open the System->Features->Network page
Video (Yellow)	Select to open the System->Features->Video page
Other (Blue)	Select to open the System->Features->Other page
Refresh (Purple)	Refreshes the information on the current page.

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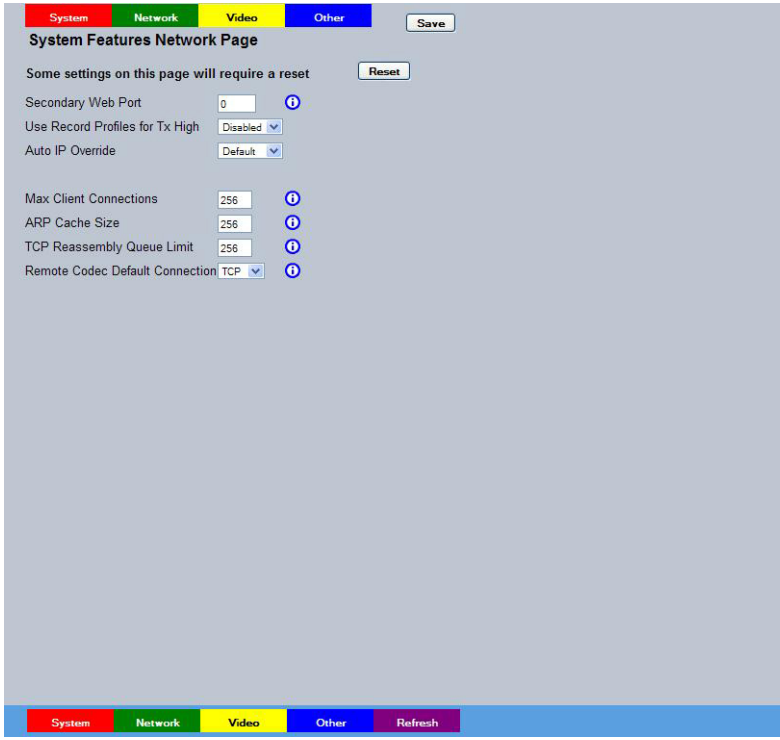
System Features Network



Secondary Web Port	If the default port setting for web serving has already been allocated, it is possible to configure a second port number i.e. the secondary web port can be set to 8000 if the default web port (80) is blocked by the network or firewall.
Use Record Profiles for Tx High	Select this option when units required Video Transmission profile (rate/quality/resolution) is identical to that being recorded.
Auto IP Override.	This is set to disabled when the camera is configured. Enable to attempt Zero Config address negotiation.
Max Client Connections	This setting limits the number of client connections to the server. The default value is 256 but could be increased if there is heavy network traffic.
ARP Cache Size	This setting limits the number of cache entries available in the ARP table. The default setting of 256 is adequate for most instances
TCP Reassembly Queue Limit	This setting limits the maximum number of TCP segments allowed in the reassembly queue, to protect against a common DoS attack.
Remote Codec Default Connection	This selects the initial connection type to use for an auto configured remote codec camera, select from TCP or UDP
System (Red)	Select to open the System->Features->System page
Network (Green)	Select to open the System->Features->Network page

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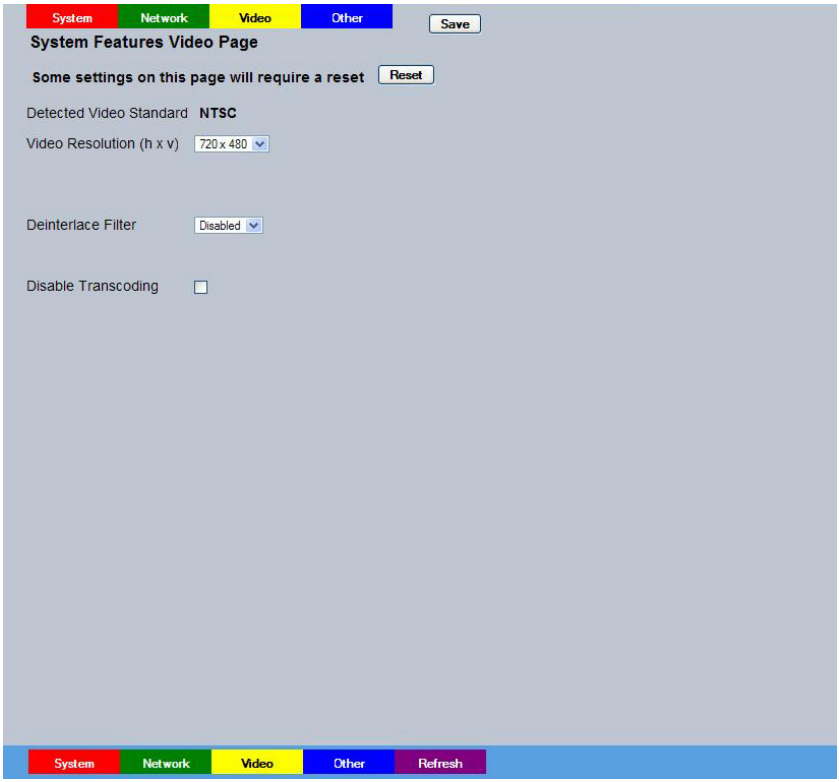
Video (Yellow)	Select to open the System->Features->Video page
Other (Blue)	Select to open the System->Features->Other page
Refresh (Purple)	Refreshes the information on the current page.

System Features Video



Detected Video Standard	The unit automatically detects the video standard being used i.e. PAL/NTSC.
Analogue Output Resolution	Allows selection of the resolution, options are 704 x 576, 704 x 512 and 640 x 512
Deinterlace Filter	Select this option to improve display clarity and minimise the comb effect that may be visible when recording high motion scenes in high resolution.
3D Input Filter	Options are Off, Time Domain Filter, Spatial Filter, or Both.

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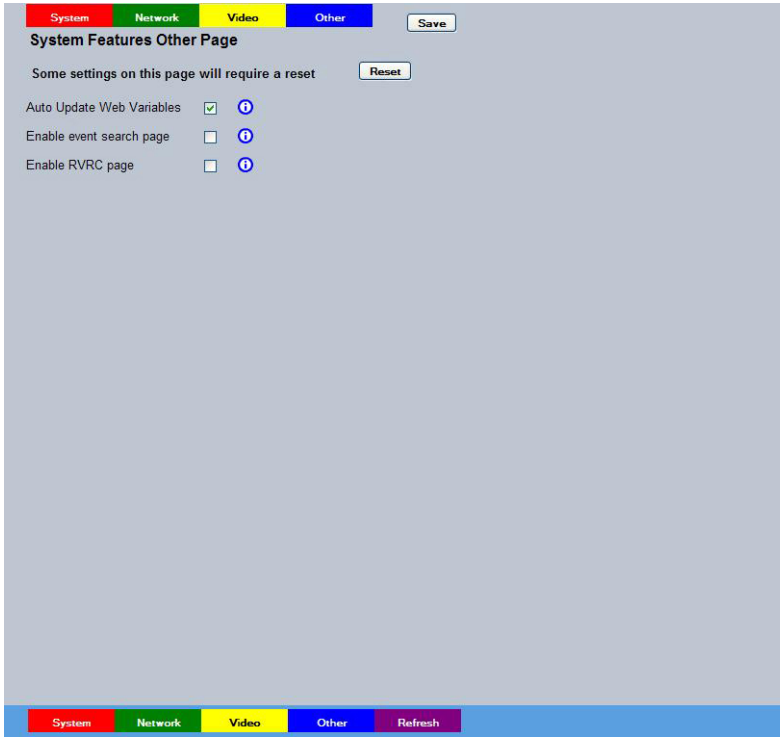
Segment Aspect Ratio	This setting control how a 4:3 image is displayed in a multi-screen or wide screen format on the local viewer. The available display segment changes depending on the number of multi screen images selected for display. Stretch forces the image to fill the available display segment. This may result in some distortion of the display image. Zoom Fit forces the frame to fill the available segment completely and proportionally. Consequently some of the image at the top and bottom of the frame may be cropped. Frame Fit forces the frame to fill the available segment proportionally, resulting in black bars left and right on some multi display choices.
System (Red)	Select to open the System->Features->System page
Network (Green)	Select to open the System->Features->Network page
Video (Yellow)	Select to open the System->Features->Video page
Other (Blue)	Select to open the System->Features->Other page
Refresh (Purple)	Refreshes the information on the current page.

System Features Other



Auto Update Web Variables	This is used to enable/disable the configuration page auto update acceptance option which is displayed when the configuration webpage version has been updated.

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	The default is to auto accept and update the configuration pages.
Enable Event Search Page	Select to enable the Event Search option.
Note: *When de-selected here, the 'Event Search' menu will no longer be displayed in the menu tree.*	
Enable RVRC page	Select this option to activate the RVRC Remote Set/Unset/Override function, refer to 'Record Settings-RVRC' for more information.
Note: *When de-selected here, the 'RVRC' menu will no longer be displayed in the menu tree.*	
System (Red)	Select to open the System->Features->System page
Network (Green)	Select to open the System->Features->Network page
Video (Yellow)	Select to open the System->Features->Video page
Other (Blue)	Select to open the System->Features->Other page
Refresh (Purple)	Refreshes the information on the current page.

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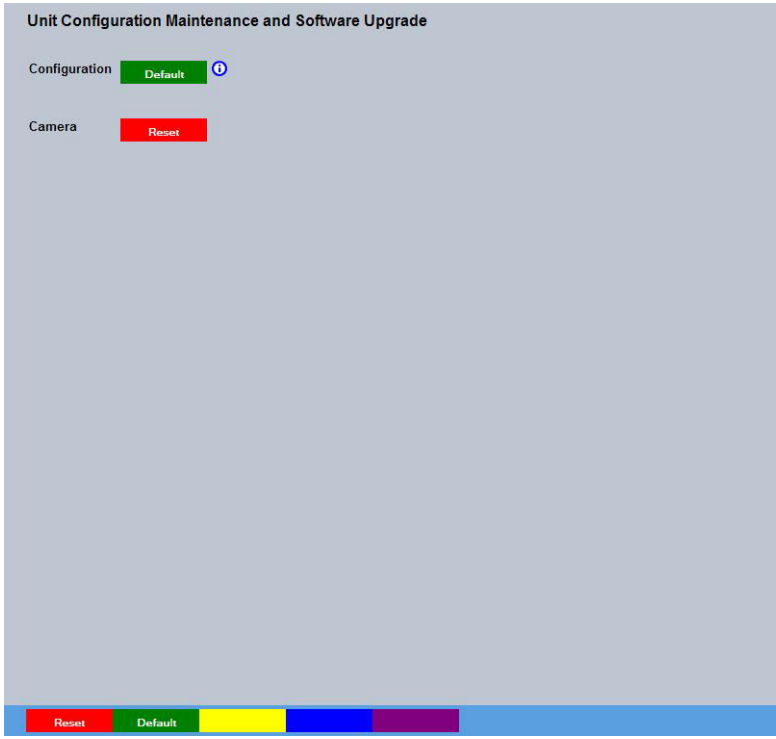
Maintain

This menu allows the unit to be reset and a software upgrade to be performed via an inserted CD/DVD or a connected USB device. Current unit settings can also be saved for future use and previously saved settings restored.



Camera

Reset (Red) — Select to restart the unit.

Configuration

Default (Green) — Select to return the unit to its factory default settings and restart.

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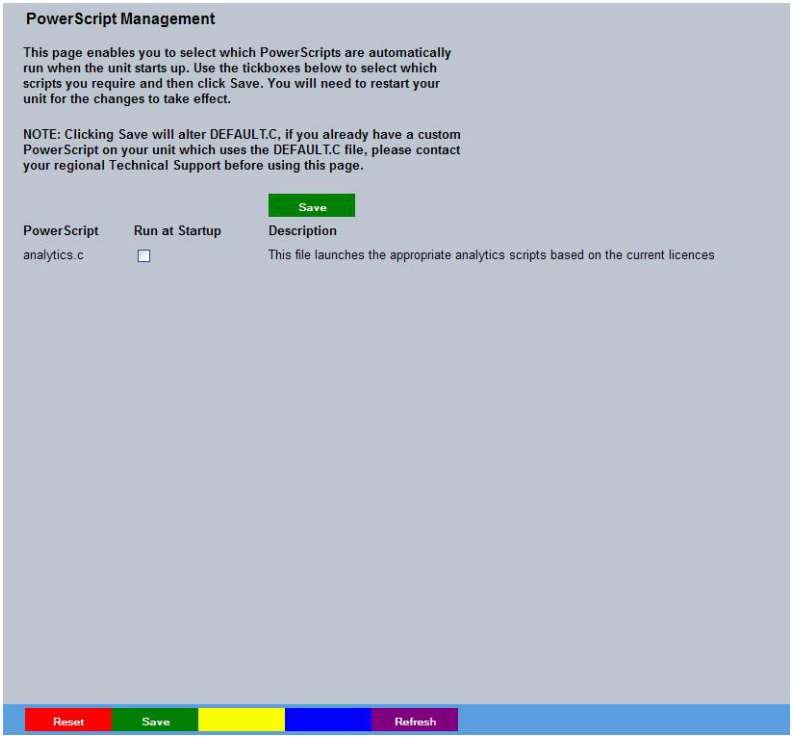
Powerscript Management

This page enables you to select which PowerScripts are automatically run when the unit starts up. Use the tickboxes below to select which scripts you require and then click Save.

Note: *You will need to restart your unit for the changes to take effect.*

Note: *Clicking Save will alter DEFAULT.C, if you already have a custom PowerScript on your unit which uses the DEFAULT.C file, please contact your regional Technical Support before using this page.*



Reset (Red)	Resets the unit
Save (Green)	Saves the current settings
Refresh (Purple)	Refreshes the current page

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Display

The Display menu allows settings for the local viewing client to be established and user access to the system.

The Viewer Defaults page allows the Viewer menu settings to be configured.

The User Accounts page helps protect configuration procedures by limiting access to specific users via accounts and passwords.

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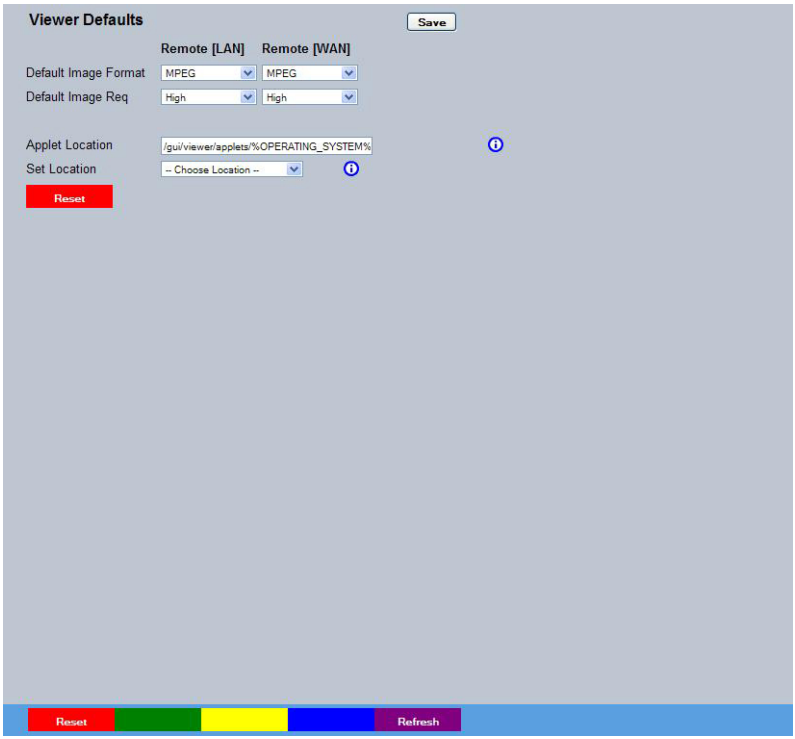
Viewer Defaults

The units Viewer function allows remote users to simulate local operation over a network. This menu allows configuration of settings for the Viewer function, refer to 'Operating The Viewer' for more information regarding the Viewer.



Default Image Format	Images from cameras can be displayed in either JPEG or MPEG format. Default settings can be configured for accessing the Viewer function via a low bandwidth connection (WAN) or a higher bandwidth connection (LAN).
Default Image Req	Images displayed full screen in the Viewer menus can be shown in either High Medium or Low resolution. Default settings can be configured for accessing the Viewer function via a low bandwidth connection (WAN) or a higher bandwidth connection (LAN).

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Applet Location	The location of the unit's Viewer menu applet is displayed. The default location will always be the applet installed on the unit. If accessing multiple units via a remote connection, all can be assigned the same Viewer applet. This will lessen the load time required when accessing different systems. For example, if a local unit and a remote DVR are to be accessed, it is possible to set the Applet location for both DVRs as the local unit. If viewing the unit remotely, Dedicated Micros provide a remote applet located on the Dedicated Micros website (www.dedicatedmicros.com/software_release/windows/viewer-applet.jar). Due to possible bandwith restrictions on the network the DVR is located, using this remote applet may improve data transfer speeds.
Set Location	Select the applet location. Choose from 'Default location' i.e. the applet installed on the unit; or the 'Dedicated Micros website' option i.e. the remote applet.
Reset (Red)	This button will restart the unit.
Refresh (Purple)	Refreshes the current page

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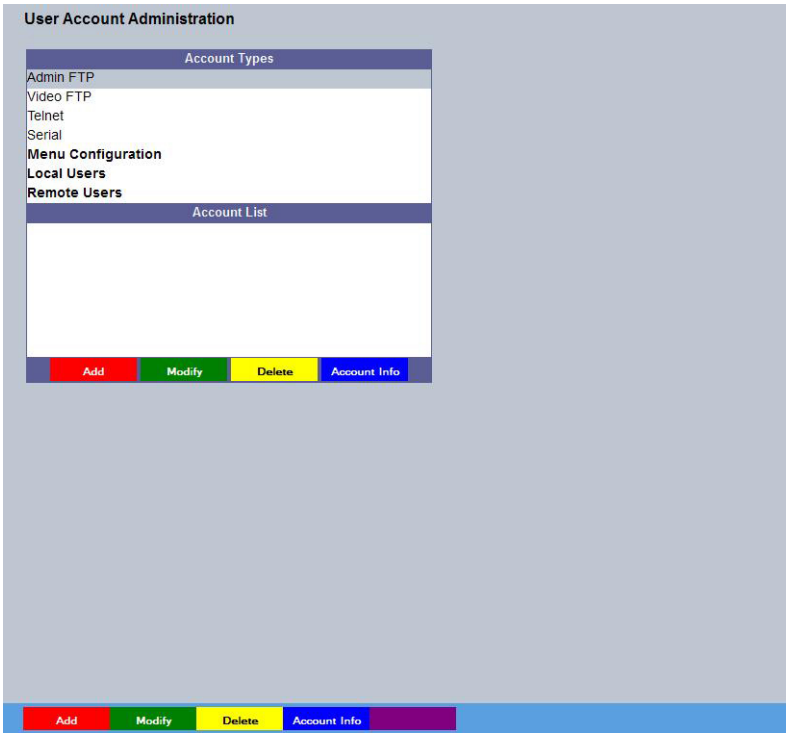
User Accounts

The unit can protect configuration procedures by limiting access via usernames and passwords. By default, no usernames and passwords are configured for any account type.



Account Types

The available account types for which users and passwords can be assigned privileges are:

Admin FTP

Assigning username and password requirements for the Admin FTP function will limit access to the unit via an FTP connection.

Default username:none Default Password:none.

Video FTP

Assigning username and password requirements will limit access to the recorded video on the unit via an FTP connection.
Default Username:dmftp Default Password:ftp.

Telnet

Assigning username and password requirements for Telnet connections will limit Telnet access to the unit (Telnet can be used to upgrade the unit).
Default Username:dm Default Password:none.

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Serial

Assigning username and password requirements for Serial connections will limit access via a Serial link.
Default username:none Default Password:none.

Menu Configuration

Assigning WebPage Configuration privileges will limit access to the Configuration menus when viewed remotely. When implemented, the user will be prompted for a username and password before access to the Configuration menus (via the main menu) will be granted.
Default Username:dm Default Password:none

Local Users

Assigning Local Users access privileges will limit access to the Viewer pages for local users. When implemented, the local user will be prompted for a username and password before access to the Viewer pages (via the main menu) will be granted.

Remote Users

Assigning a username and password protects camera images from unauthorised access.
Default username:none Default Password:none.

Note: *Where there are no assigned, access will be granted to all users and no request for a username and password will be made.*

Account List	When an Account Type is highlighted, details of users with access will be displayed.
Add(Red)	Highlight an administration feature i.e. Serial and select 'Add'. Enter the new User Name and Password. That user's name will now be displayed in the account list.
Modify (Green)	To modify a user's settings, highlight the user in the list and press Modify.
Delete (Yellow)	To delete a user's settings, highlight the user in the list and press Delete.
Account Info (Blue)	Opens a detail page displaying information about the settings.

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Camera

The Camera menus allow configuration of the camera setup, refer to the individual menus for further details.

The Setup page allows the quick configuration the camera setup.

The Iris Control page allows adjustments to settings of a DC drive lens when one is fitted. This is to allow for tolerances in manufacturers lenses.

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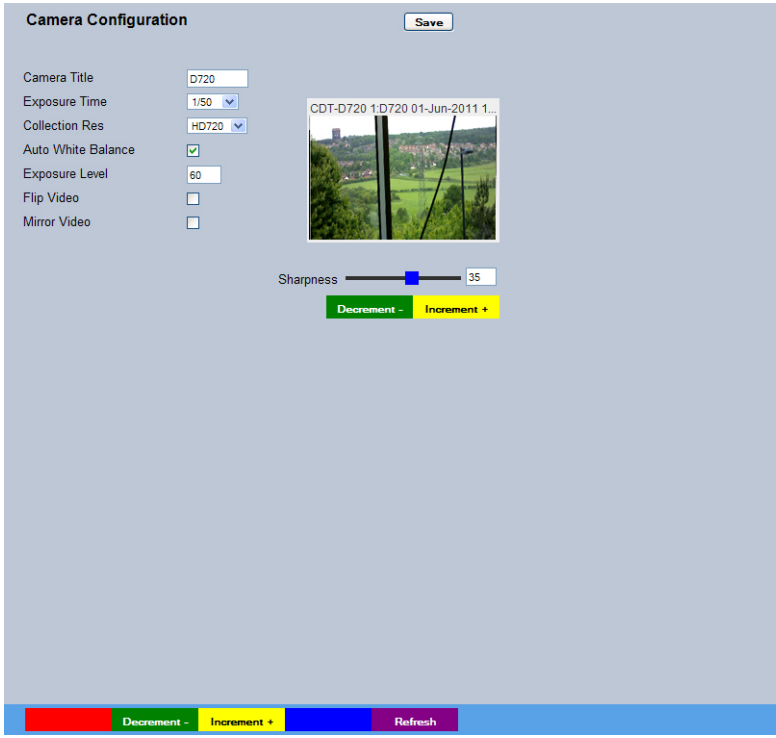
Setup

This menu allows the configuration of local camera settings for the unit.



Camera Title	This title can be edited to allocate a name to the unit. This is displayed when the unit is accessed via NetVu ObserVer and is set when transmitting information to a Remote Video Response Centre (RVRC)
Exposure Time	Exposure time defaults to 1/50 which prevents blurring of the recorded image. For views containing high speed images, the setting can be increased (to a max of 1/100[PAL] or 1/120[NTSC]). For views containing static images, the setting can be decreased (to a min of 1)
Collection Res	Setting the Max Collection Resolution limits the unit to record within the selected maximum resolution. Lowering the resolution settings will significantly lessen the storage capacity requirements when using Integrated Camera Recording. Available resolutions range from CIF to UXGA.
Auto White Balance	Enables auto tracing white balance.
Exposure Level	Sets the target exposure level that the electronic iris will try to attain. This can be used to adjust the brightness of the image.
Flip Video	Used to invert the image when the camera is mounted upside down.

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Mirror Video	Select to ‘mirror’ the camera image (horizontal flip).
Sharpness	Manually adjust the image sharpness.
Decrement - (Green)	Decrease sharpness
Increment + (Yellow)	Increase Sharpness
Refresh (Purple)	Refreshes the current page

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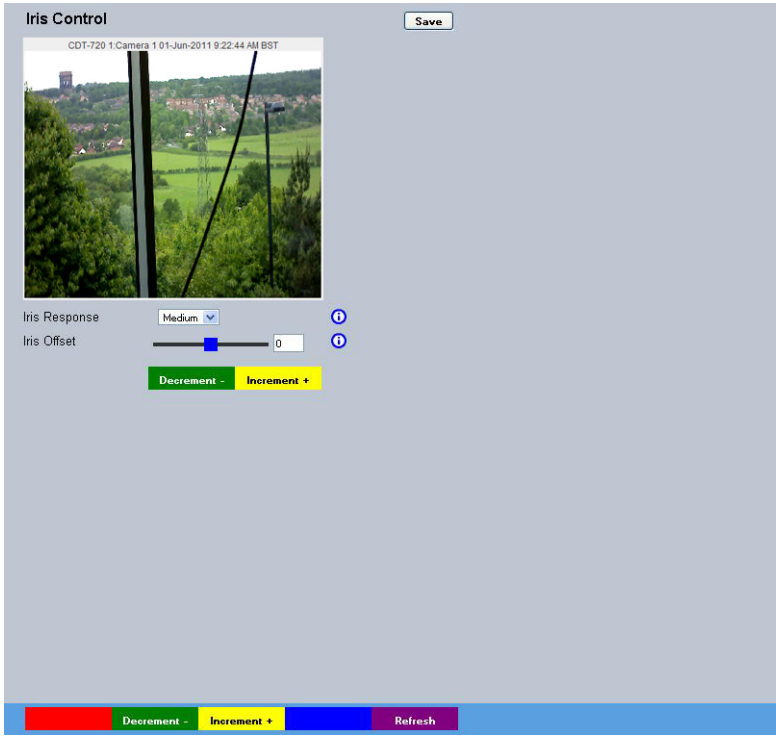
Iris Control

This menu is for advanced use only. It is factory set and should not require any alteration.
Under normal operating conditions no adjustment is needed, however in certain circumstances benefits may be seen through minor adjustment for some DC drive lens.



Iris Response	This will change the speed at which the Iris will respond to changes in lighting conditions. The default is for a medium speed of response however this can be set to react slower or faster to changes in the scene as desirable to suit lens types and conditions.
Iris Offse	Iris Offset is calibrated from the factory. However it may be necessary to adjust this setting for different manufacturers lenses to allow for differences in their specification. If the images from the camera are pulsing in brightness, start by incrementing slowly until an improvement is seen. If by doing this the pulsing is actually getting worse,decrement instead to correct. If stability can not be reached then use the slower Iris response setting.
Save (Red)	Save the current settings.
Decrement - (Yellow)	Use the button to reduce the zero crossing point setting by 1
Increment + (Blue)	Use the button to increase the zero crossing point setting by 1
Refresh (Purple)	Refreshes the current page

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ICR Settings

The ICR Settings menus allow configuration of the unit's record functions. ICR settings can be configured for normal operation, on alarm, by schedule and for set holiday and weekend periods. Selected video data can be saved and protected. Refer to the individual menus for further details.

The Default page allows the basic Recording settings to be edited.

The Profile Record page allows the recording configuration to be based on specific priorities. The record rate and quality can be customised to respond appropriately to the alarms and time of day. A high degree of control and flexibility is possible using these options.

The Protect Video page allows previously recorded data to be protected and retained. If needed, allrecording can be halted and saved video deleted.

The AoE page allows configuration of the units ATA over Ethernet (AoE) function. AoE is a network protocol designed for simple high-performance access of storage devices over Ethernet networks Importantly the external storage device must be located on the same network as the unit.

The Video Storage page displays drives that are available for video recording and allows the formatting and allocation of these devices.

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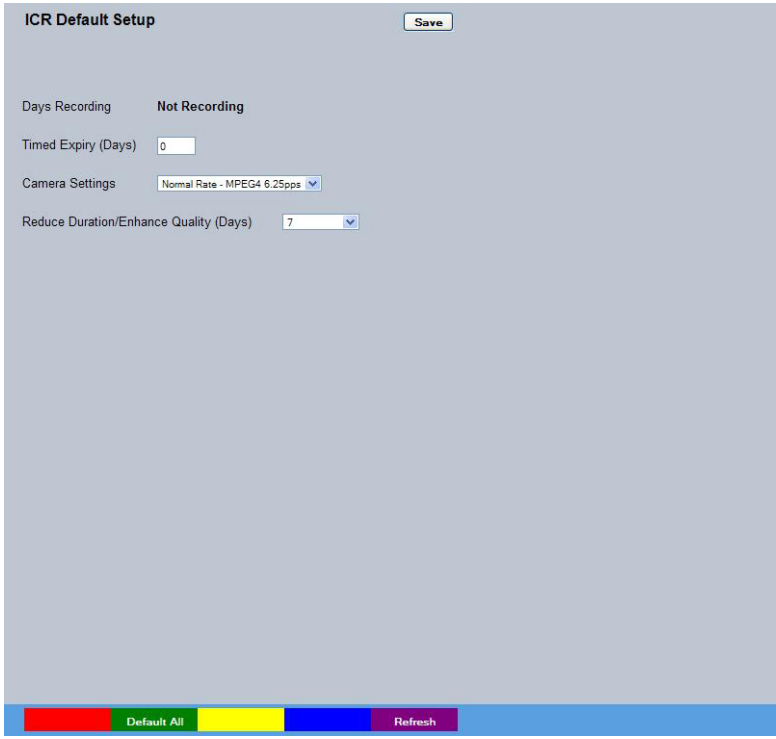
Default

The unit has a range of pre-defined configurations available. As standard the unit can record at 5pps MPEG4 and at a selected number of days. Alternatively the unit can be configured for 2pps JPEG recording on each camera or for ***Multi****Mode operation (note that this will result in the record duration being determined by the time period the unit is in alarm).*

Note: *This page is only relevant if images are being recorded to the camera. If a DVR is being used, recording direct to the camera may be disabled.*



Days Recording	Displays the record duration possible using the current configuration.
Timed Expiry	If required, all stored recorded video can be permanently deleted after a set number of days. Set to '0' to de-activate this function.
Camera Settings	Choose the rate of non alarm recording to be used from the range of preset recording profiles. Select from Normal Rate-MPEG4 5pps, Normal Rate-JPEG 1pps or Normal Rate-**Multi***Mode* recording.
Record Duration/Enhance Quality	The recording duration can be limited to a set number of days; allowing the recording quality to be enhanced for a shorter storage period.
Default All (Green)	Restore record settings to factory defaults.
Refresh (Purple)	Refreshes the current page.

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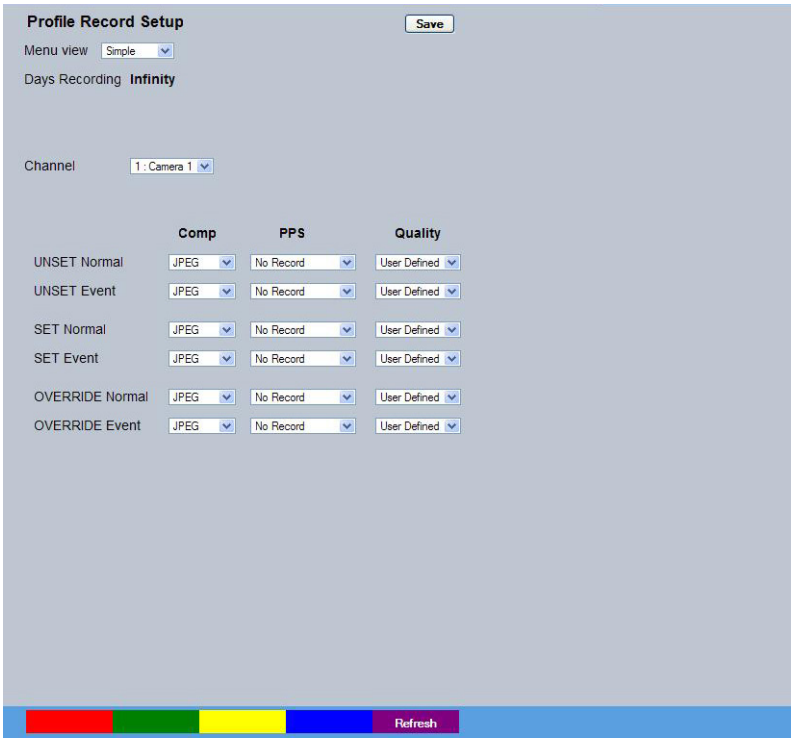
Profile Record

It is possible to set the unit recording configuration based on specific priorities. The **Multi***Mode recording feature offers the ability to set different recording rates, resolutions and compression formats across unset, set and override modes for each individual camera. By varying the quality, bit rate and file size of recorded images, the* **Multi***Mode function enables the recording capabilities of the unit to be greatly increased.*

Note: *This page is only relevant if images are being recorded to the camera. If a DVR is being used, recording direct to the camera may be disabled.*

Simple Record



Menu View	Switch to the Advanced Profile Record menu.
Days Recording	Displays the record duration possible using the current configuration.
Unset/Set/Override Normal	Shows the recording profile used by the camera if no Timer Functions are applied and the camera is operating under Normal (non Event) conditions, *refer to the 'Schedules' section for further details*.
Unset/Set/Override Event	Shows the recording quality that will be used by the camera during an Alarm or Event. Note that Set and Override schedules will be used only when Timed Schedules are applied, *refer to the 'Schedules' section for further details*.

Note: *Unset, Set and Override modes may be renamed via Record Settings->Schedule.*

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Comp	Select image compression format (MPEG, JPEG or H264).
PPS	The accompanying dropdown list allows the number of frames captured per second to be set. The pictures per second (pps) option allows either 6, 5, 2, 1, 0.5, 0.25 or 0.1 pps to be recorded. Pictures can also be recorded at 1/4, 1/2 or 3/4 Real Time. To disable record, choose the 'No Record' option. Select 'User Defined' to use settings established in the Advanced Profile Record menu.
Quality	The accompanying dropdown list allows the quality of recorded images to be set. Select from Maximum, Very High, High, Medium, or Low. Select User Defined to use settings established in the Advance Profile Record menu.

Note: *The higher the Quality setting, the greater the storage space needed.*

Refresh (Purple)	Refreshes the current page

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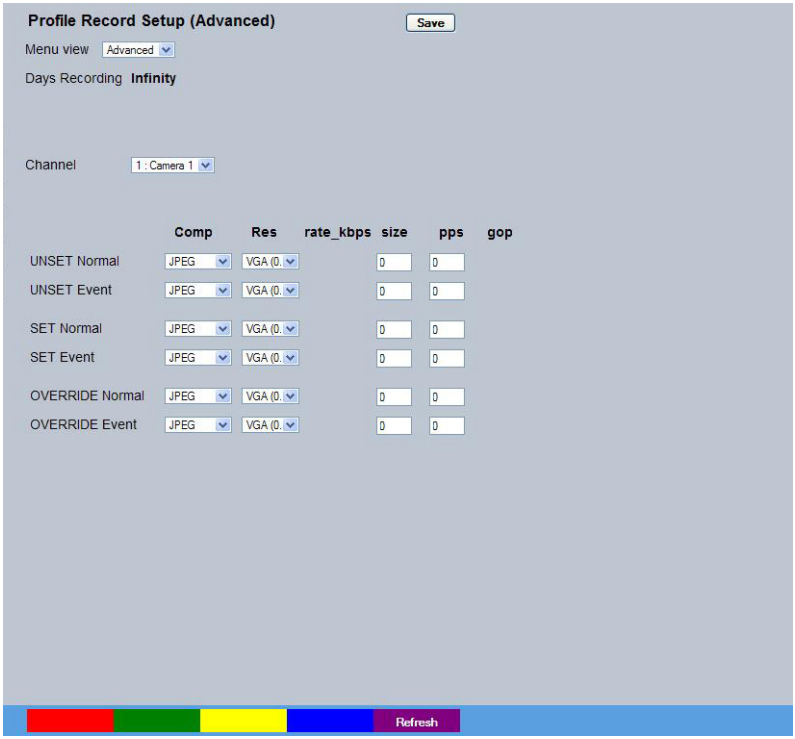
Advanced Record



Menu View	Switch to the Simple Profile Record menu.

Note: *When Advanced Record settings have been changed, it is not possible access the Simple Record menu until the newly configured Advanced Record settings have been applied. To do this, open the Record menu and select the 'Save' option. It will then be possible to return to the Profile Record menu and access Simple Record.*

Days Recording	Displays the record duration possible using the current configuration.
Channel	Displays the Camera Name.
Filter by	Displays the Recording Settings.
Unset/Set/Override Normal	Shows the recording profile used by the camera if no Timed Schedules are applied and the camera is operating under Normal (non Event) conditions. Refer to 'Schedule' for further information.
Unset/Set/Override Event	Shows the recording quality that will be used by the camera during an Alarm or Event. Note that Set and Override schedules will be used only when Timed Schedules are applied. Refer to 'Schedule' for further information.
Comp	Select image compression format (MPEG, JPEG or H264).
Res	Select image resolution format (HD720, XGA,SVGA, VGA, QVGA, Q2VGA).

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rate_kbps	If MPEG4 is selected, the figure entered here will be the bit rate allocated. A higher bit rate will provide better quality. MPEG bit rates can be entered within the range of 45-2500K bits/second.
Size	If JPEG is selected, the figure entered here will be the size of the JPEG transmitted (in Kbytes). JPEG file sizes can be configured within the range of 5-45Kbytes.
PPS	Select the number of pictures recorded per second.
GOP	If using MPEG4 recording, select the number of images recorded within a GOP (Group of Pictures). A GOP consists of an I-Frame (keyframe) and following P frames.
Refresh (Purple)	Refreshes the current page.

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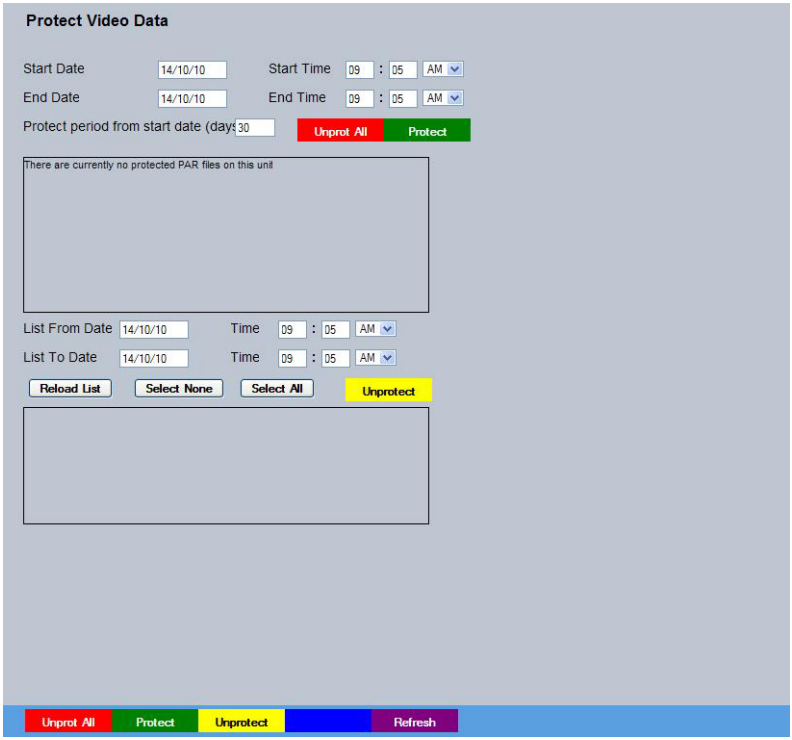
Protect Video

This menu allows the unit to automatically protect and retain recorded data in the camera. Previously saved data can also be unprotected. Enter a start and end time and select 'Reload List' . All saved video files from the chosen time period will be shown in the upper textbox. These recorded 'PAR' files can then be selected and protected via their accompanying checkboxes and the Protect option. Selected video files can also be unprotected via the Unprotect option.

The lower textbox provides a status report detailing which video files have been protected/unprotected.



Start Date	Enter a start date to protect video.
Start Time	Enter a start time to protect video.
End Date	Enter an end date to protect video.
End Time	Enter an end time to protect video.
Protect Length (days)	Enter the number of days that selected files will be protected for.
Protect	Select this option to protect recorded video for the selected time period(s).
Unprotect	Select this option to unprotect recorded video selected from the list.
Reload List	This will refresh the video list according to the selections made in the Start Time/Date and End Time/Date dialog boxes.

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Select None	This de-selects all the available video files.
Select All	This selects all the available video files.
List From Date/Time	This dialog box allows a search to be made within the protected video list starting from a specific Time and Date.
List To Date/Time	This dialog box allows a search within the protected video list to conclude at a specific Time and Date.
Refresh (Purple)	Refreshes the current page.

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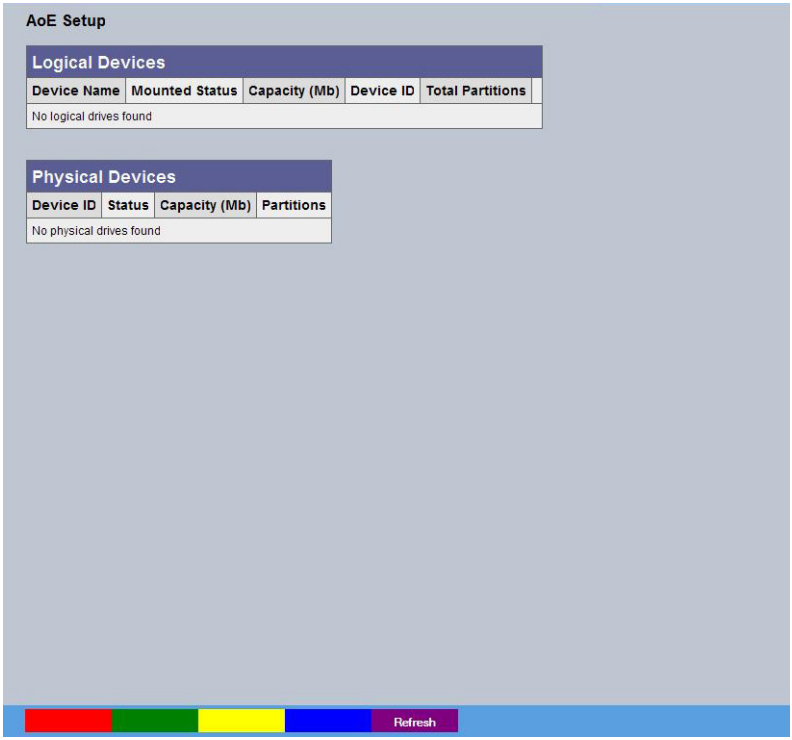
AoE

This menu allows configuration of the units ATA over Ethernet (AoE) function. AoE is a network protocol designed for simple high-performance access of storage devices over Ethernet networks. Importantly the external storage device must be located on the same network as the unit. AoE does not rely on network layers such as IP and TCP, making it non routable i.e. routers cannot be used to forward a packet across disparate networks. AoE packets can only travel within a single local Ethernet storage area network (adds a physical layer of security to the information). The stored video can only be accessed by plugging directly into an ethernet socket in the same LAN as the host. This means AoE cannot be accessed over the Internet or other IP networks, but makes AoE more lightweight (with less load on the host), easier to implement, provides a layer of inherent security, and offers higher performance.



Logical Devices	Connected AOE Devices - Any devices in this panel are being used by the unit to store data. They can be freed by clicking on the Release button.
Physical Devices	Available AOE Devices - Any devices in this panel are available on the network. They can be added to the storage capability of this unit by 'claiming' the storage. Unavailable storage is listed as Owned. Claimed storage capacity can be 'released' in the top panel.
Refresh (Purple)	Refreshes the current page.

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Video Storage

The Video Storage Allocation table displays drives that are available for video recording. Entries with the prefix '/HDD0' indicate the units local hard drive (if installed), entries prefixed by '/udd0' are recordable media connected to the unit via USB sockets (if fitted), an entry prefixed by '/mdd' are installed SD cards.

Device	Entries with the prefix '/HDDx' (from 0 upwards) indicate the units local hard drives (if installed), entries prefixed by '/uddx' (from 0 upwards) are recordable media connected to the unit via USB sockets, an entry prefixed by '/mdd0' is the installed SD card. Subsequent MDDx entries are for extra SD cards (where fitted).
Size	The device returns information when it is interrogated on connection to the camera, the size of the recordable media is amongst this data.
Partitions	The device returns information when it is interrogated on connection to the camera, the number of partitions is amongst this data.
Allocate	Formatted media can be allocated to the camera to allow it to be used for recording. DM recommends that media is formatted before allocation, even if if has been used previously for video storage.
Realm	Displays the status of the associated media.
Feedback	Displays messages about the progress of formatting/allocation of the media.

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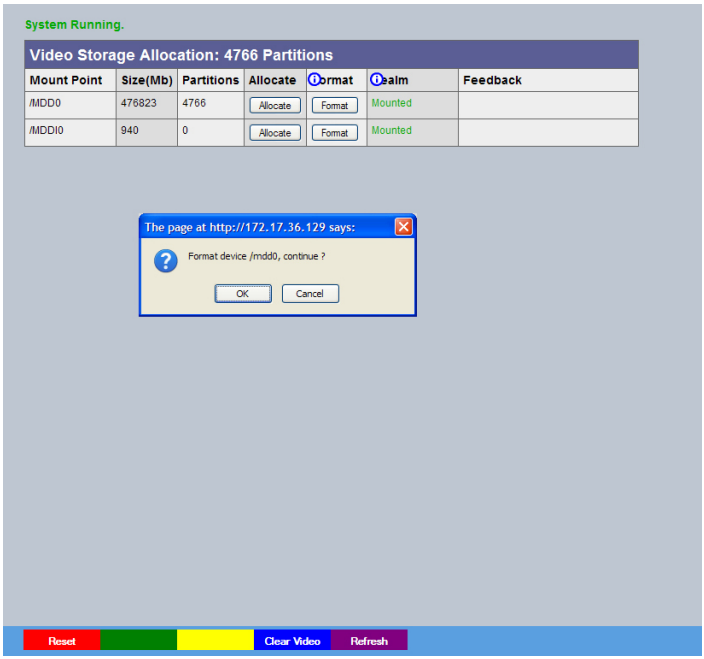
Format (Red)	Prepares the media for video storage, *refer to 'To format additional Video Storage'*.
Stop Rec (Yellow)	Suspends Recording on the unit
Clear Video (Blue)	Wipes the video from the drive to disable playback.
Refresh (Purple)	Refreshes the current page

To format additional Video Storage

1. Plug a USB storage device into one of the available USB ports and click the purple Refresh button. The newly connected device will be displayed with a '/UDD' prefix. The SD card (if installed) will also be displayed and can be allocated in the same way. USB devices will be prefixed '/UDD', SD cards will be prefixed '/MDD'.
2. The device may require formatting. DM recommends the device is formatted even if it was previously been used as video storage. Click on the 'Format' button adjacent to the device listing to prepare the device for recording.



3. Allocate the formatted and mounted storage for video storage by clicking on the 'Allocate' button. Allocation takes between a few seconds and a few minutes, depending on the size of the drive, and the Feedback column will display information about the allocation process. The unit will require a Reset once allocation is complete.

Note: *The unit application drive is protected, if it is allocated the unit will only remove the video folder. Formatting any other device will remove all data. In either case recording on the system is halted while formatting and, if already allocated, the formatted device will be de-allocated as a video storage device*

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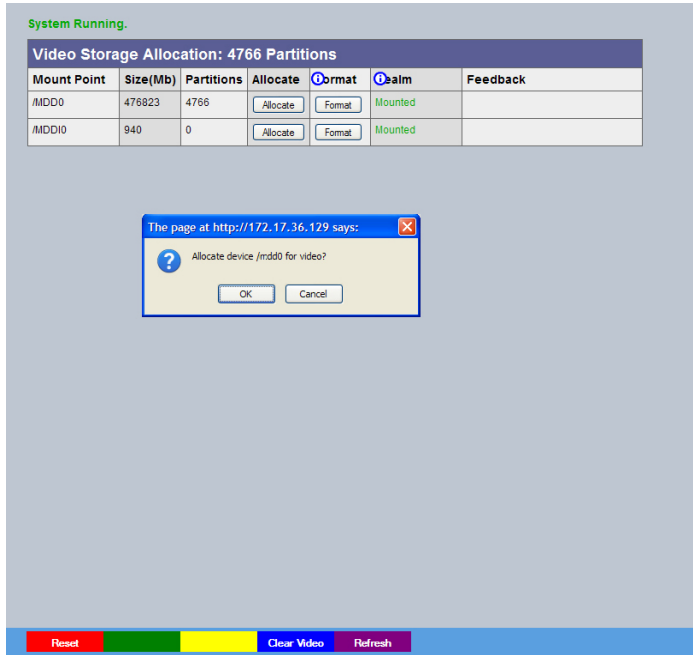

The system displays a confirmation box to ensure the correct device has been selected. Click OK to confirm, then reboot the system. Once the power has cycled, the system will build the required PAR files ready for recording to commence, progress will be displayed in the Feedback column.

Note: *There will be a pause before recording begins, dependant on the size of the USB device as video partitions are built.*

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Schedule

This menu allows the Timer Function names to be configured. The Timer Function enables the unit to automatically be put into set/unset mode at specific times on specific days. This can help reduce unnecessary alarm triggers. The mode can be set by the DVR that the camera is connected to.

When the unit is in Set or Unset mode, combine with different recording qualities and rates under normal and alarm conditions for a high degree of control in a range of situations.

The Setup page allows configuration of the schedule including naming the modes of operation and controlling when the unit changes between modes.

The RVRC page allows a user to temporarily switch the unit's system state into set/unset/ override mode.

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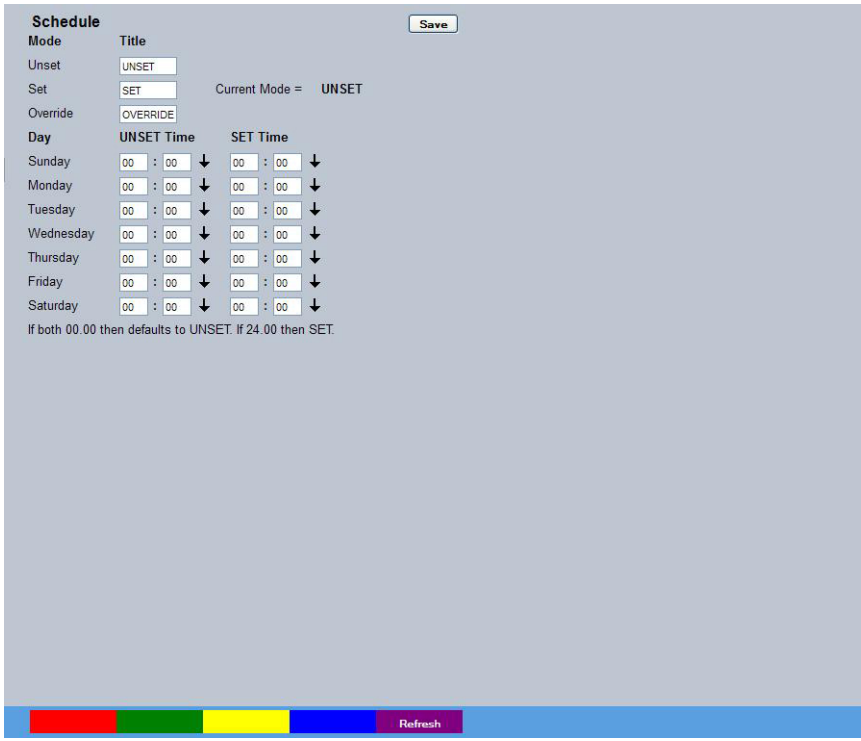
Setup

This menu allows the Schedule function to be configured. This enables the unit to automatically be put into set/unset mode at specific times on specific days. This can help reduce unnecessary alarm triggers.

Combining when the unit is in Set or Unset mode with different recording qualities and rates under normal and alarm conditions gives a high degree of control in a range of situations.



Mode/Title	Enables a name to be entered for Unset, Set and Override mode.

Note: *Any changes to Mode titles here will affect the mode names displayed in the Profile Record, IP Record and Zone Input menu pages.*

Current Mode	Shows the current timer mode according to the names entered in the Mode/Title text boxes.
Day	Specifies which Day of the week is being configured

NOTE: *The next two descriptions utilise the standard name settings for the profiles (SET, UNSET). If these names have been changed on this page, these menu options will display the user configured names.*

UNSET Time	Specifies what time in format HH:MM the UNSET recording settings, configured on the Profile Recording page, will become operational
SET Time	Specifies what time in format HH:MM the SET recording settings, configured on the Profile Recording page, will become operational

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Note: *The arrow button displayed next to each textbox allows settings to be replicated for those cameras listed below. This will only affect the adjacent option i.e. Mode arrow will replicate the Mode setting to all cameras below the clicked arrow.*

Note: *To disable one day, set both times to 00.00. To have the profile recording all 24 hours of a day, set both times to 24.00*

Refresh (Purple)	Refreshes the current page.

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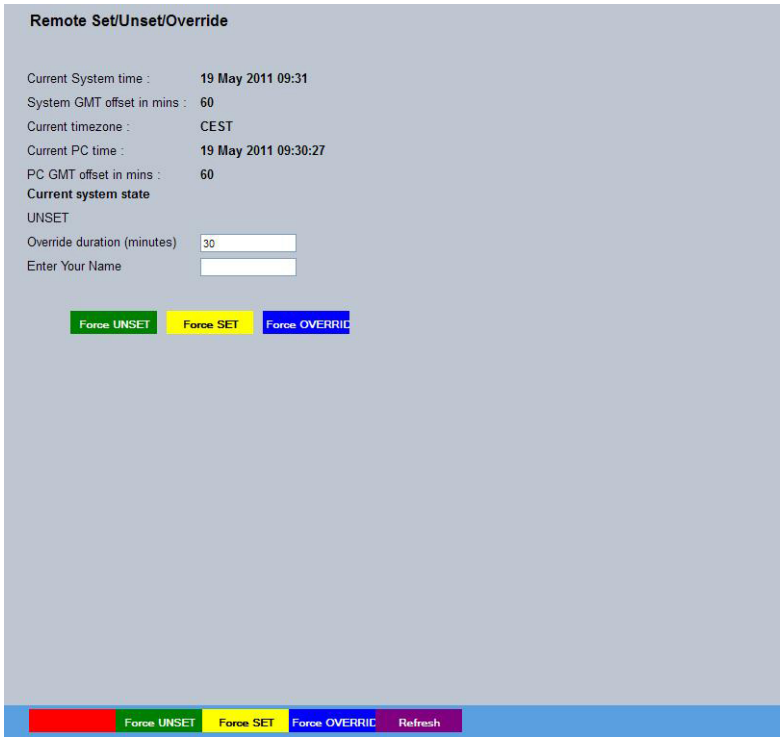
RVRC

This menu allows a user to temporarily switch the unit's system state into set/unset/override mode. The user will be required to enter their name and also the intended override duration. The action will be logged.

Note: *Refer to the Schedule menu for details of how to configure Set, Unset and Override modes: Record Settings->Schedule.*



Current System Time	The unit's current date and time information will be displayed. This will be logged with any override action.
System GMT offset in mins	Shows the number of minutes between the time in the time zone configured for the unit and GMT.
Current timezone	Displays the configured time zone for this unit, as set on the System->Time and Date page.
Current PC Time	The current date and time information of the PC currently being used to view the configuration pages will be displayed. This will be logged with any override action.
PC GMT offset in mins	Shows the number of minutes between the time as configured on the connected PC and GMT.
Current system state	The current system state will be displayed i.e. Set, Unset or Override.

Note: *The system state names displayed here will depend on those entered via the Schedule menu: Record Settings->Schedule.*

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Override duration (minutes)	Enter a time period for the override procedure. After this time period, the system state will return to that configured via the Schedule menu (for the current time).
Enter Your Name	Enter your recognised user name. This will be logged.
Force UNSET(Green)	Select to switch to Unset mode.
Force SET (Yellow)	Select to switch to Set mode.
Force OVERRIDE (Blue)	Select to switch to Override mode.
Refresh (Purple)	Refreshes the information on the current page.

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Alarm Settings

The Alarm Settings menus allow configuration of the unit's alarm functionality. Individual alarm inputs and alarm zones can be configured.

The Zone Input page enables the configuration of alarm zones. Up to 32 separate alarm zones can be created.

The Zone Actions page enables actions such as Go to Preset to be allocated to alarm zones. Zones can also be associated with a specific camera. On receipt of an alarm, images from the associated (primary) camera will automatically be displayed in the Viewer menu.

The Alarm Response page enables configuration of responses following an VMD/Activity Detection trigger.

The Activity page allowed activation and configuration of the Activity feature on all video inputs. The Activity feature enables cameras to automatically detect any movement/changes within the video scene. This can trigger a number of operations such as FTP alarm notification or an increase in the recording rate.

The VMD page enables the unit's VMD (Video Motion Detection) to be set-up. VMD allows a camera to automatically detect if there is any movement/changes within specific areas of the video scene.

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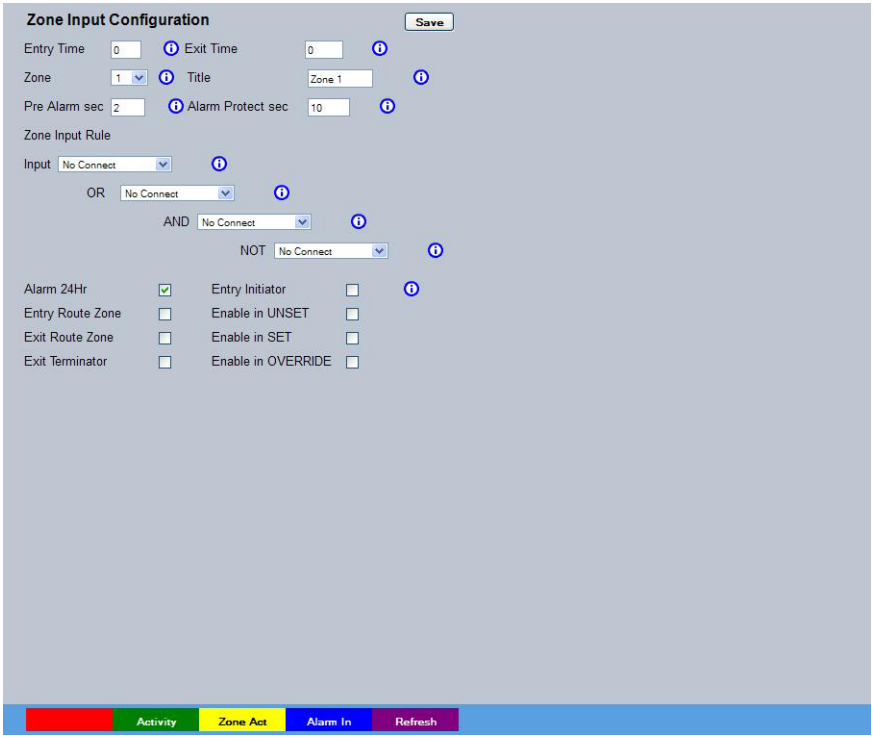
Zone Inputs

This menu allows the configuration of established alarm zones. A single or multiple trigger can be used to generate an alarm. It is possible to allocate up to 32 alarm zones to carry out a combination of actions. Use these options in conjunction with the Zone Actions menu.



Entry timer	This is the number of seconds allowed for the user to enter the zone and disable the alarms. If the alarm is not disabled within this period the alarm will be triggered.
Exit timer	This is the number of seconds from the alarm being set within which the user must exit the set zone. If the user is still within the zone after this time period the alarm will be triggered.
Zone	An alarm zone can be established to logically groups alarms and initiate actions when an alarm is activated, there are 32 configurable zones.
Title	This information is stored along with the relevant images in the database, ensure this has relevance to the alarm zone.
Pre-Alarm sec.	This is the time period prior to the start of the alarm included with the alarm recording for archive. These images will also be protected from being overwritten.

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Note: *It is recommended that the Pre-Alarm option be set to the same value as the Pre-Trigger setting in the "Profile Record" menu. This will ensure successful playback of high quality Pre-Trigger images. High quality pre-trigger images will only playback properly if review (playback) starts prior to the pre-trigger initiation.*

Alarm Protect sec.	This is the minimum time period in seconds (from the start of the alarm) that is protected from being overwritten. This time will include the alarm trigger, the pulse extension and any post alarm recording. It will not include pre-alarm images.
Zone Input Rule	This determines which input(s) will trigger the zone alarm:
Input	This sets an input or system function as the primary alarm trigger. Select from Disk Low, Disk Full, Panic, Archiving Slow, Archiving Fault, Virtual 1-16, and Keyword Channel 1 (which will trigger the Alarm if any of the programmed keywords are detected).
Zone OR Input	The Zone OR Input identifies an alternative input that can also be used to trigger the zone alarm. This means an alarm trigger can be received on the Zone Alarm Input or the Zone OR Input for the zone to be activated.
Zone AND Input	The Zone AND Input identifies that an alarm trigger needs to be received on both the Zone Alarm Input and the Zone AND Input for the zone to be activated and the alarm action to the automatically initiated.
Zone NOT Input	The unit will only issue the alarm actions if the trigger is received on the zone alarm input and NOT on the Zone input.
Alarm 24hr	This option can be enabled for alarms that do not require change at any time and are to remain as programmed i.e. Panic Alarm. When this is selected, the Set, Unset and Override options are disabled.
Entry Route Zone	This creates deferred alarms along a specified route while the entry time is active. This is in compliance with BS8418 (the British Standard for remote video reporting centres). Diverting from the entry route during the countdown will result in the alarm being triggered immediately. This allows staff entry without triggering an alarm prior to switching the system to Unset mode.
Exit route Zone	This creates deferred alarms along a specified route while the exit time is active. This is in compliance with BS8418 (the British Standard for remote video reporting centres). Diverting from the exit route during the countdown will result in the alarm being triggered immediately. This allows staff to exit without triggering an alarm.
Exit Terminator	This will trigger the exit timer if the system is set. A countdown timer will automatically start when the alarm is activated and ensure the alarm system is not activated by other specified alarm triggers for the Set time i.e. allowing a Guard to exit a building.
Entry Initiator	This will trigger the entry timer if the system is set. A countdown timer will automatically start when the 'primary' alarm trigger i.e. front door, is actioned. This ensures the alarm system is not activated by other specified alarm triggers for the set time
Enable in Unset	Each alarm can be configured to be active when the unit is in a specific operation mode. Enable this for the zone alarm to be active in Unset operation mode.
Enable in Set	Each alarm can be configured to be active when the unit is in a specific operation mode. Enable this for the zone alarm to be active in Set operation mode.

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Enable in Override	Each alarm can be configured to be active when the unit is in a specific operation mode. Enable this for the zone alarm to be active in Override operation mode.

Note: *Unset, Set and Override modes can be given more recognisable titles i.e. Day, Night, Weekend via the Schedule menu (Record Settings->Schedule).*

Activity (Green)	Select to open the Alarm->Activity menu
Zone Act (Yellow)	Select to open the Alarm->Zone Actions menu
Alarm in (Blue)	Select to open the Alarm->Inputs menu
Refresh (Purple)	Refreshes the information on the current page

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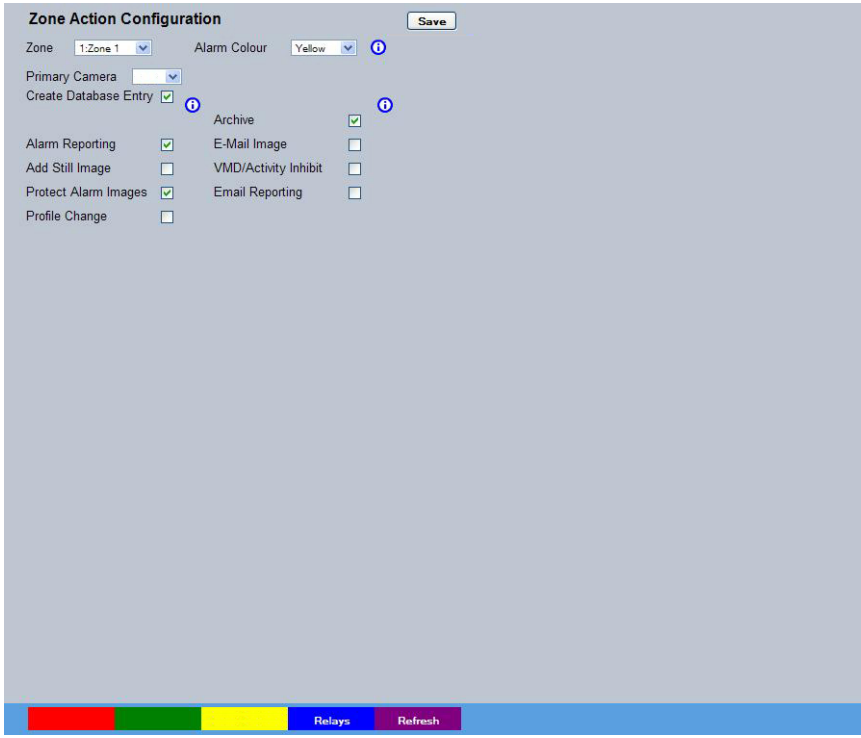
Zone Actions

This menu allows actions to be allocated to individual alarm zones; Primary and Secondary cameras can be allocated to the zone and actions undertaken following alarm activation. This page should be configured in conjunction with the Zone Inputs menu.



Zone	Select a zone (alarm) to configure.
Alarm Colour	This displays the local alarm text in the selected colour and can be useful in prioritising alarms. Options available are Red, Green, Blue, Yellow, Cyan and Magenta.
Primary Camera	This allows a camera to be assigned as the primary camera associated with the Alarm Zone. The primary camera will be displayed when an alarm in this zone is triggered.
Create Database Entry	An alarm activation will be added to the database. The zone title will be used as part of the entry information.
Alarm Reporting	This must be enabled to allow the unit to send an alarm notification to an external destination i.e. an RVRC reporting via NetVu ObserVer.
Add Still Image	This will record a still image of the trigger along with the standard recording. This can then be sent on to an external destination.
Protect Alarm Images	Alarm images can automatically be protected from being overwritten.

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Profile Change	Select to enable the unit to switch from Normal to Event recording following alarm zone activation.
Archive	Select to ensure the unit automatically downloads alarm images via an FTP connection to an FTP server.
E-mail Image	If this option is selected, a JPEG will be added to the reporting e-mail (if E-mail Reporting is selected).
VMD/Activity Inhibit	Select to inhibit (ignore) the VMD/Activity detection feature. for further information, *refer to 'Alarm Settings->Activity Setup'*.
E-mail Reporting	The unit can send an e-mail when an alarm is detected. For further information, *refer to 'Network->E-mail'*.
Relays (Blue)	Select to open the Alarm->Global Actions menu
Refresh (Purple)	Refreshes the information on the current page

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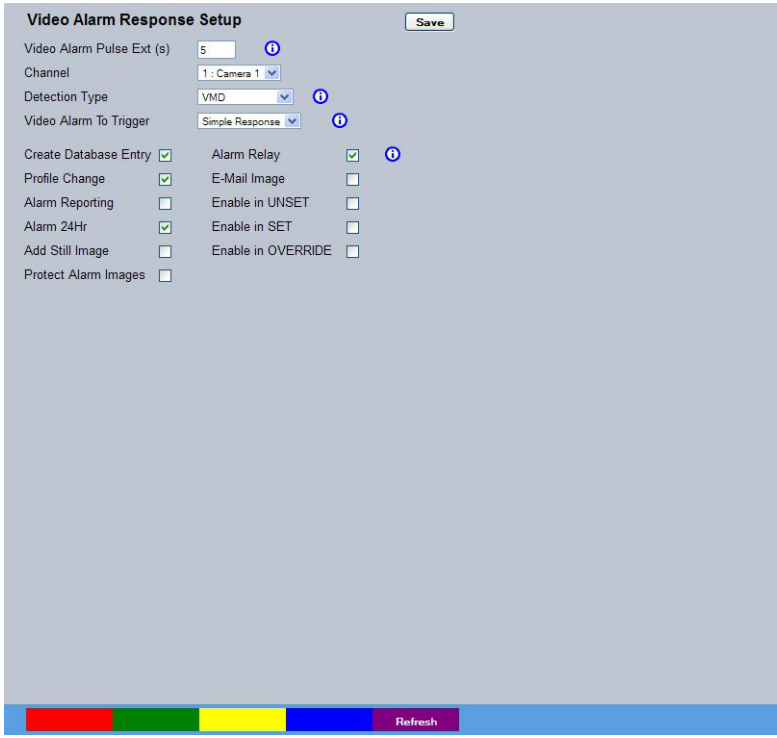
Alarm Response

This menu enables response configuration following activity trigger on the camera channel.



VMD Pulse Extension	The pulse extension extends the trigger period to avoid double triggers of VMD occurring, i.e. If a second incident of VMD is received, after the first alarm is finished but within this period, the unit will not create a new event.
Channel	Select the camera input for configuration from the drop down list.
Detection Type	Each camera input can be configured for either 'VMD' or 'Activity' detection. To assign no detection settings to the camera, select 'None'

Note: *Whichever Detection option is selected here, will result in the camera channel being only available for editing in the relevant configuration menu i.e. if Activity is selected; this channel can only be edited for Detection in the Activity Setup menu and not the VMD Configuration menu.*

Activity To Trigger	Following Activity activation, select 'Simple Response' to trigger specific chosen responses from the options detailed below. Select 'Zone' to apply the Zone Input rules as configured in the Zone Input menu, *refer to 'Zone Input' for more information*.

Note: *When Activity to Trigger is set to 'Zone'; the options detailed below are unavailable.*

Create Database Entry	When selected, an alarm entry will be added to the Event database.

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Profile Change	Select to enable the unit to switch from Normal to Event recording following alarm activation.
Alarm Reporting	This must be enabled for the unit to automatically connect on alarm.
Alarm 24hr	This will ensure that Activity Detection is permanently enabled on this camera channel.
Add Still Image	This will record a still image of the trigger along with the standard recording. This can then be sent on to an external destination.
Protect Alarm Images	Select to automatically protect alarm images from being overwritten.
Alarm Relay	This will trigger the unit's on-board relay following VMD/Activity activation.
E-Mail Image	This will email a still image (in JPEG format) of the VMD/Activity trigger to the email recipient as configured in the 'E-mail' menu (Network Settings->E-mail)
Enable in Unset	This will enable Activity Detection when the unit is in Unset operation mode.
Enable in Set	This will enable Activity Detection when the unit is in Set operation mode.
Enable in Override	This will enable Activity Detection when the unit is in Override operation mode.

Note: *Unset, Set and Override modes can be given more recognisable titles i.e. Day, Night, Weekend via the Schedule menu (Record Settings->Schedule).*

Refresh (Purple)	Refreshes the information on the current page

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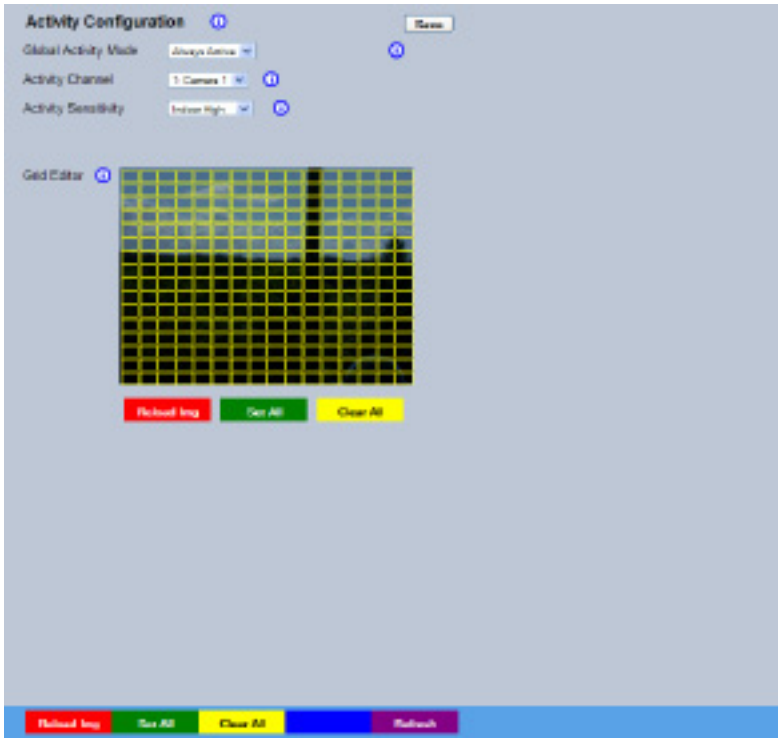
Activity Setup

The unit supports Activity Detection on all video inputs. It enables the camera to automatically detect any movement/changes within the video scene; this can trigger a number of operations such as FTP alarm notification and an increase in recording rate.
A still image of the selected camera will be shown in the Grid Editor screen. To establish an Activity zone, edit the cells displayed across the image.
This option should be used in conjunction with the Zone Inputs and Zone Actions menus.

If the camera is configured to detect VMD, the following warning will be displayed. Use the Alarm Settings-> VMD/ACT Response menu option to configure 'Detection type' for Activity.

Once Activity is configured, this page will be displayed



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Global Activity Mode	Select ‘Always Active’ for Detection to operate constantly
Activity Channel	This is a drop down list of the video inputs on the unit, selecting an input will display images from the corresponding video source.
Activity Sensitivity	This option allows the sensitivity setting to be established for the activity grid being configured. There are five settings to choose from: Indoor High, Indoor Low, Outdoor High, Outdoor Low, Very Low.
Grid Editor	Use the Grid Editor by placing cells in areas of the camera view where movement will trigger an alarm. To enter cells navigate across the image via the Directional buttons of the I.R Remote Control). If viewing on a local monitor place a cell by pressing the OK button. If viewing via the remote configuration pages, use the mouse to navigate across the image, use the left mouse button to place a cell.
Reload Img (Red)	This option will update the still image displayed in the Grid Editor.
Set All (Green)	This option will insert a default square of 16 x 16 cells across the displayed video image.
Clear All (Yellow)	This option will clear all entered cells.

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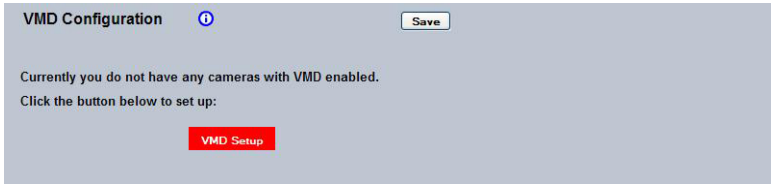
VMD Configuration

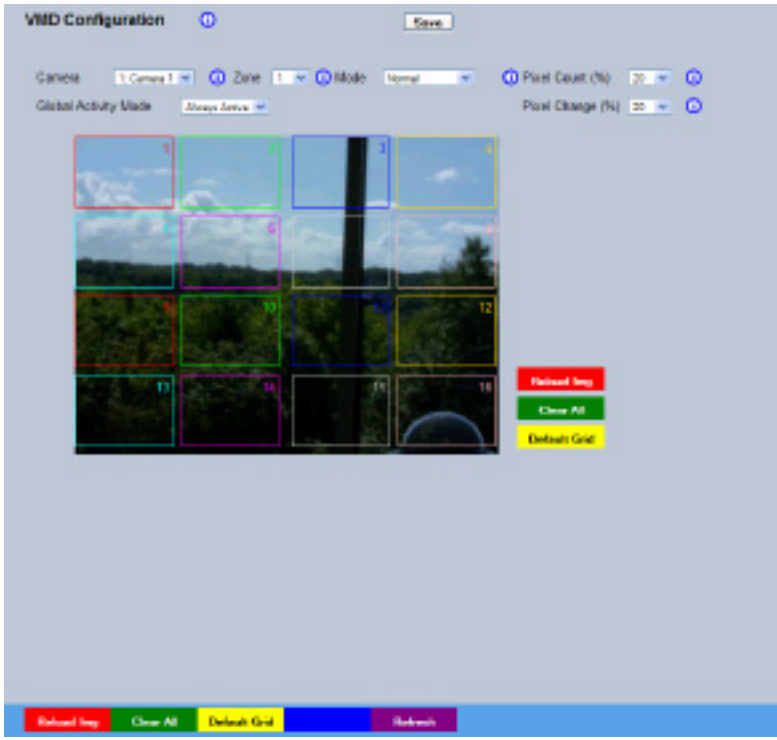
The unit supports VMD (Video Motion Detection) to automatically detect if there is any movement/changes within the video scene.

Note: *Video Motion Detection enables a greater degree of control over detection settings and configuration than the Activity Setup function. Each of the 16 VMD Zones can be directly sized and configured to suit specific requirements. VMD can only be accessed and configured remotely via the webpages.*

If the camera are configured to detect Activity,the following warning will be displayed. Use the Alarm Settings-> VMD/ACT Response menu option to configure 'Detection type' for VMD.



Once Activity is configured, this page will be displayed



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Camera	Displays the available Camera source.
Zone	There are 16 VMD zones within the image that can be individually configured, select the zone from the drop down list. A selected zone can be re-sized by clicking the mouse button (use the USB mouse if viewing on a local monitor) and then moving and clicking the mouse again. A rectangle will then be displayed based on these two selected points.
Mode	The zone mode identifies when the reference image is taken for triggering VMD. The options are: **Normal** – The reference image is updated approx every second. This will only allow small changes in the scene without triggering **Last trigger** – The reference image is only updated when the VMD is triggered and is best used under controlled lighting, i.e so there are no false triggers due to ambient light changes. **Static** – The reference image is collected on startup and is never updated. This would be used in 'sterile' areas where there are no changes expected. **Zone disabled** – This will disable the zone mode.
Pixel Count (%)	This value is set as a percentage and equates to the percentage of pixels in the selected zone that must change for the VMD event to be triggered. The default setting is 20%.
Pixel Change (%)	This setting is a percentage value of the overall change required in the greyscale to be included in the pixel count. The percentage change is defined over the complete range of black to white, a 100% pixel change would be from black to peak white. The default setting is 20%.
Global Activity Mode	Select 'Always Active' for Detection to operate constantly
Reload Img (Red)	Refreshes the camera image.
Clear All (Green)	Removes all defined zones from the image.
Default Grid (Yellow)	Displays the default 16 zone grid across the whole image.

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Network Settings

The Network Settings menus allow configuration of the unit's network functionality. Key network settings can be established such as 'fixing' the unit's IP address and maximum transmission rate. E-mail, remote reporting on alarm and FTP download can also be configured, refer to the individual menus for further details.

The Network page allows configuration of the unit's network connections such as the name assigned to the unit and its IP address.

The Live Trans(mission) page enables JPEG and MPEG profiles to be created for transmitting images via a High, Medium or Low quality network connections to any viewing software or to another unit using this one as an IP source.

The Multicast page allows recordings from the unit's camera input to be forwarded to a port address; enabling multiple viewers to view live data using a suitable media player without the need to directly connect to the unit.

The Email page allows configuration of the Email feature. The unit can automatically transmit an e-mail to an SMTP Server following an event i.e. on receipt of an alarm or a camera failure notice.

The Remote Reporting page allows a Remote Video Receiving Centre's (RVRC) configuration details to be entered. The RVRC will then be contacted following a selected event occurring i.e. reported alarm or camera failure.

The Web Cam page allows the video input to be made available for transmission to a webserver via a designated webcam server. The image can then be incorporated into a web page and accessed via a standard web browser.

The FTP Download page allows data to be archived to a central FTP server. This could be on receipt of an alarm, Activity activation or at a scheduled time to back-up recorded video.

The Firewall page allows configuration of the onboard firewall.

The Connections page displays the current live connections to the unit.

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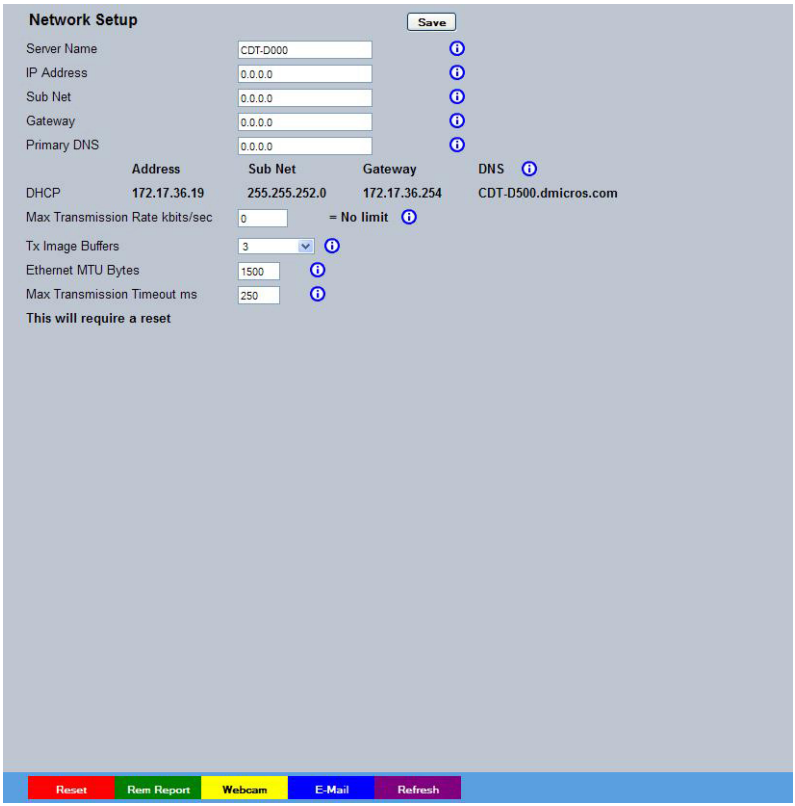
Network

This menu allows network settings to be configured if required. The unit is DNS compliant, and can be referenced on the network using the configured server name (or serial number) if a DNS server is available .



Server Name	This field can be edited to allocate a name to the unit. This would be used if accessing the unit via a Domain Name Server (DNS).It will initially default to the serial number of the unit.
IP Address	An IP address can be manually allocated to the unit.
Sub Net	A Subnet address of the unit network can be manually allocated.
Gateway	This is the IP address of the default gateway (router).
Primary DNS	This is the primary DNS server IP address for applications utilising domain names.
DHCP	If DHCP is being utilised, the assigned IP address will be displayed here.

Note: *If no IP address is manually configured, DHCP will automatically assign one. The unit interrogates the network for a DHCP server, which assigns an available IP address. This IP address can change every time the unit is powered up. If DNS is not available, it is recommended that DHCP be disabled by entering a suitable, free, static IP address.*

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Tip: *Use DHCP to locate a free IP address, then fix the unit IP address to the free one by entering the details into the IP address, subnet and gateway fields.*

Max Transmission Rate kbits/sec	This shows the maximum transmission speed for the network type being used. If set to '0', transmission speed is not limited in the camera.

Note: *This setting will limit and override any higher transmission rate entered in the Video Transmission menu (Configuration menu->Live Trans).*

Force 10BaseT operation	The unit supports 10 or 100BaseT half duplex transmission. Selecting this option will force the unit to operate at a 10BaseT connection.
Tx Image Buffers	This is used in order to improve the picture delivery over Ethernet when using a slow connection i.e. 256Kbps. A buffer setting of 1,2 or 3 is available (default setting is 1).
Ethernet MTU Bytes	This is the maximum transmit unit for the Ethernet packet. The MTU is the largest physical packet size measured in bytes that the network can transmit. By default this figure is set to 1500bytes.
Max Transmission Timeout ms	This is the time (in milliseconds) the unit will wait to re-send a packet if an acknowledgement is not received.
Reset (Red)	Resets the unit to apply changes.
Rem Report (Green)	Opens the Network Settings->Remote Reporting page.
Webcam (Yellow)	Opens the Network Settings->Web Camera Configuration page.
Email (Blue)	Opens the Network Settings->Email page.
Refresh (Purple)	Refreshes the current page.

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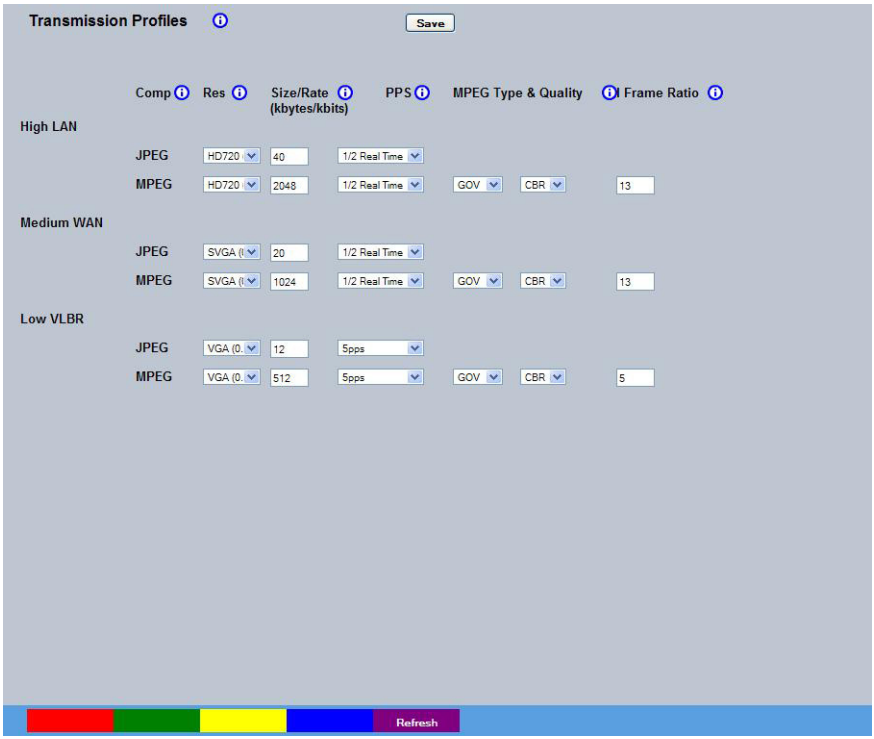
Live Trans

The unit transmits live images using JPEG or MPEG formats.
The NetVu Connected remote viewing software will use the settings configured on this page as the defaults for JPEG & MPEG; High, Medium and Low settings.



High LAN/Medium WAN/Low VLBR	This shows the transmission settings configured for a High quality LAN (Local Area Network) connection, Medium quality WAN (Wide Area Network) connection or a Low quality VLBR (Very Low Bit Rate connection).
Comp	Settings can be established for JPEG and MPEG compression.
Res	For MPEG and JPEG transmission, select image resolution settings (HD720, XGA,SVGA, VGA, QVGA, Q2VGA).
Size_rate	For JPEG, the figure entered will be the size of the JPEG transmitted (in Kbytes). JPEG file sizes can be configured in the range of 5-45Kb. For MPEG4 the figure will be the bit rate allocated. A higher rate will provide better quality picture display. MPEG bit rates in the range of 45-2500Kbits/second.

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PPS	This shows the number of pictures transmitted per second. For JPEG, the actual images transmitted will depend on the bandwith of the link, increasing the pictures sent per millisecond may introduce time lag if bandwith is not sufficient *i.e. this forces the same quality image through the available connection*. On MPEG transmission, increasing the pictures sent will also reduce the quality of the images *i.e. this forces more images but maintains the defined bit rate*.
MPEG Type & Quality	Select whether transmitted MPEG4 images are sent as RAW data or in GOV (Group of Video) format. RAW mode transmits a single I frame and then a sequence of P frames (until a change in transmission is detected). GOV mode sends I and P frames in a standard format i.e. I to P frame ratio as set by the record parameters. CBR maintains a Constant Bit Rate, selectable from a range of 2 - 31. Select a suitable level of details from the drop down list. Constant Bit rate allows the storage requirements to be calculated with more accuracy.
I Frame Ratio	Select the ration of I Frames recorded between each P Frame.
Note:	An MPEG I-frame is considerably larger than a P-frame. Therefore the higher the I-P ratio, the higher the disk space required to store recorded images.
Refresh (Purple)	Refreshes the current page.

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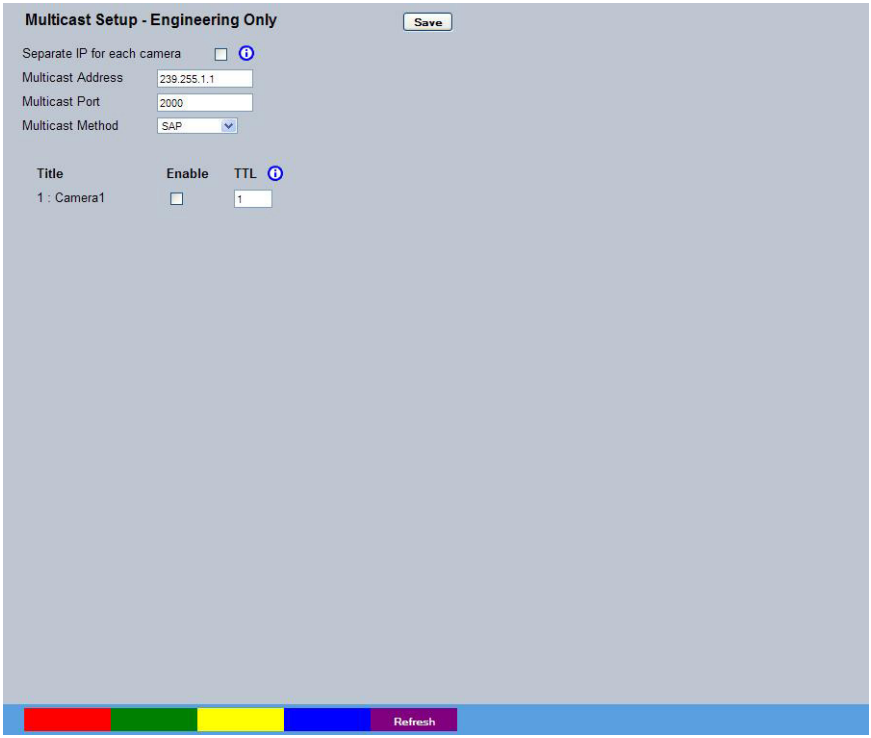
Multicast

The Multicast page allows live images from the unit to be forwarded to a port address; enabling multiple viewers to view live video using a suitable media player without the need to directly connect to the unit. In multi viewing scenarios, the demands on the unit are significantly reduced; improving overall performance.

This system has been validated using the 'Videolan VLC media player for MS Windows. The Videolan VLC media player can be downloaded free of charge from:

www.videolan.org/vlc/download-windows.html

Note: *Multicast can only used for live viewing, requests for stored images and events will still need to be made via the Viewer menu.*



Multicast Address	Assign a unique IP address. This address is not assigned to any 'physical' unit. The VLC program will use this address (when configured to do so) as its multicast group and access any broadcast images via the configured port address (see below). If there are multiple units using multicast, each one must have a unique IP address.
Multicast port	Following configuration of the IP address, configure the port address. The address will default to 1234.

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Multicast Method	Select from ‘SAP’, ‘HTTP’, ‘SAP + HTTP’ or ‘Always On’. SAP is recommended. SAP will advertise your stream over the network when using the UDP streaming method, using the SAP protocol, using the Multicast Address as the name of the stream. HTTP will stream by using the HTTP protocol on all the network interfaces of the server on port 8080.
Enable	Tick this option to enable multicast.
TTL (Time to Live)	This sets the numbers of routers the stream will be allowed to pass through, for UDP unicast and unicast access methods.. Enter one of the following numbers: 0 - restricts video to the same host 1 - restricts video to the same subnet 32 - restricts video to the same site 64 - restricts video to the same region 128 - restricts video to the same continent 255 - is unrestricted in scope

To configure your PC to utilise VLC with SAP Multicasting

Version 1.0.5

* Select Media -> Services Discovery -> SAP Announcements
* Select View -> playlist -> SAP Announcements
* All video servers with multicast enabled should then appear in the playlist window. Double click a server to start streaming data from it.

Version 0.8.6

* In VLC select Playlist -> Manage -> Services Discovery -> SAP Announcements
* Wait for the server to appear under “Session Announcements (SAP)” in the Playlist window.
* Click on one of the items advertised by the server.
* The server broadcasts SAP announcements periodically, the packets contain SDP entries which describe the stream contents for each multicast enabled camera. VLC listens for SAP announcements and adds them to the playlist.

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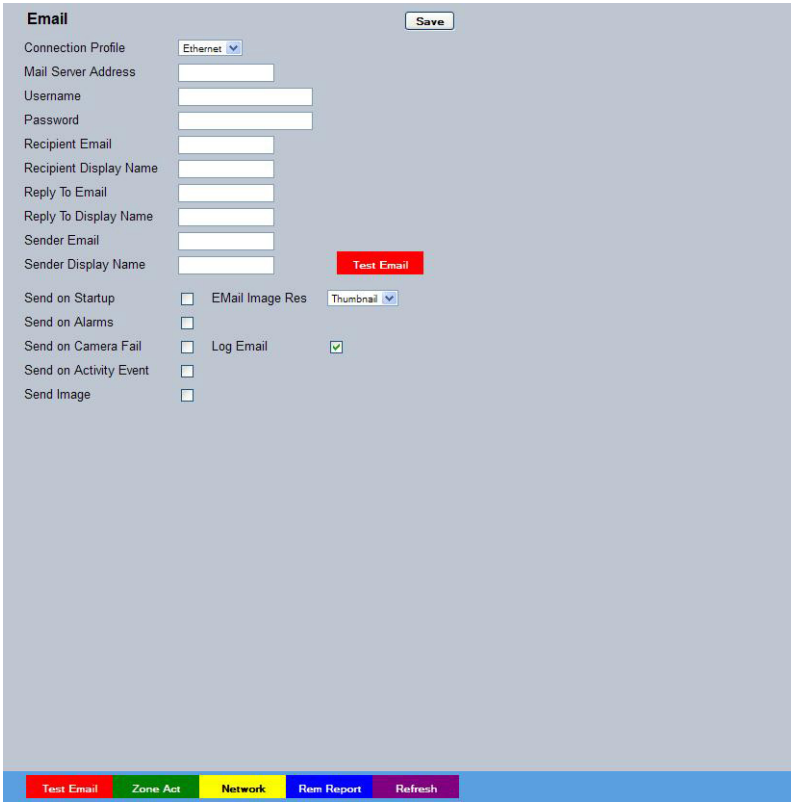
Email

The unit can automatically transmit an email to an SMTP Server under numerous conditions i.e. on start up, on receipt of an alarm, camera failure etc. This allows the unit to be installed in unmanned applications where a Remote Video Response Centre (or Manager etc.) would be notified by email if any of these conditions occur.



Connection Profile	It is possible for the e-mail to be transmitted via the Ethernet network or dial up connection (PPP 'Point to Point Protocol'). This setting presumes that a modem has been connected or configured and the unit is connected to a LAN or WAN and allocated a valid IP address.
Mail Server Address	This is the IP address or URL of the SMTP Server that the e-mail will be sent to. The SMTP server will then forward this to the intended recipient.
Username	Enter the login details for the email account used above.
Password	Enter the login details for the email account used above.
Recipient Email	This is the e-mail address of the intended recipient.
Recipient Display Name	This is the addressee name that will be shown in the e-mail name field.

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Reply to E-mail	This field must be configured if the recipient is to reply to an e-mail. The unit does not accept incoming emails therefore ensure this is a valid e-mail address.
Reply To Display Name	This is the 'reply to' name that will be shown in the e-mail name field.
Sender E-mail	These optional fields indicate the source of the e-mail notification. If the fields are left blank the unit will use the system name to create a sender name.
Sender Display Name	This is the sender name that will be shown in the e-mail name field.
Send on Startup	Select to send e-mail notification on startup.
Send on Alarms	Select to send e-mail notification on alarm activation.
Send on Camera Fail	Select to send e-mail notification on camera fail.
Send on Activity Event	Select to send e-mail notification on activation of the Activity Detection feature.
Send Image	Select to send accompanying image from supporting primary camera.
E-mail Image Res	Select resolution settings for images sent as 'thumbnail' attachments. Choose from: Thumbnail, LO (low res), MED (medium res) and HI (high res).
Log E-mail	Select to log every e-mail transaction that the unit issues.
Test E-mail (Red)	Select to send a test e-mail to the configured recipient.
Zone Act (Green)	Select to open the Alarm->Zone Actions menu
Network (Yellow)	Select to open the Network->Network menu
Rem Reporting (Blue)	Select to open the Network->Remote Reporting menu
Refresh (Purple)	Refreshes the information on the current page

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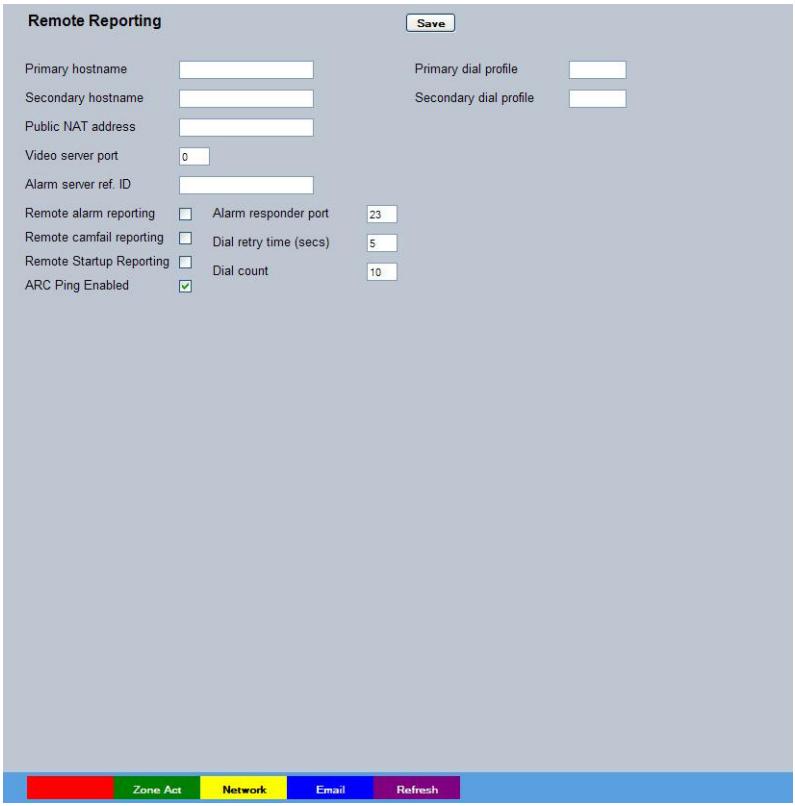
Remote Reporting

This menu details the configuration requirements for the unit to report to a Remote Video Receiving Centre (RVRC) following alarm activation.

Note: *This menu will only be displayed if 'Remote Reporting' is selected in the System Settings->Features menu.*



Primary Hostname	This is the IP address or URL of the initial host that the unit will transmit an alarm message to.
Primary Dial Profile	It is possible for the alarm message to be transmitted via the Ethernet network or a dial up connection.
Secondary Hostname	If the unit is unable to contact the primary host, an alternative route can be identified via a secondary host. If there is only one alarm receiving IP address, you must enter the details in both the primary and secondary connection settings.
Secondary Dial Profile	It is possible to select a separate dial profile for the secondary host.

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Public (NAT) Address	This is the public IP (or domain name) for a unit connected to the Internet via a NAT Router or Firewall. This field should be left blank if NAT is not used e.g. a private network.
Video Server Port	This field allows the RVRC to connect to the unit through a router that is using port forwarding e.g. if the camera does not appear on port 80 (HTTP), to the external network. Enter the port number used for forwarding here if required.
Alarm Server ref. ID	This is the reference name/ID that will be presented to the RVRC viewing application. It should therefore have some significance to the Operator.
Remote Alarm Reporting	This must be enabled for the unit to automatically connect on alarm.
Remote Cam Fail Reporting	Enabling this option ensures the unit reports camera failure on any of the inputs to the RVRC.
Remote Startup Reporting	This will send an alarm report when the unit starts up. Any system resets will be identified.
ARC Ping Enabled	Should the modem/router at the Alarm Receiving Centre be dormant, the unit will 'Ping' the ARC prior to sending reporting data.
Alarm Responder Port	This specifies the network port number used for reporting to the alarm server. In normal circumstances this should be left at the default value (23).
Dial Retry Time (secs)	If the initial connection attempt fails, the unit will wait for the specified time period (in seconds) before attempting to re-connect.
Dial Count	This identifies the number of times the unit will attempt to connect after a failed attempt. A setting of '0' means no limit and the unit will continue to try and connect until successful.
Zone Act (Green)	Select to open the Alarm->Zone Actions menu
Network (Yellow)	Select to open the Network->Network menu
E-mail (Blue)	Select to open the Network->E-mail menu
Refresh (Purple)	Refreshes the information on the current page

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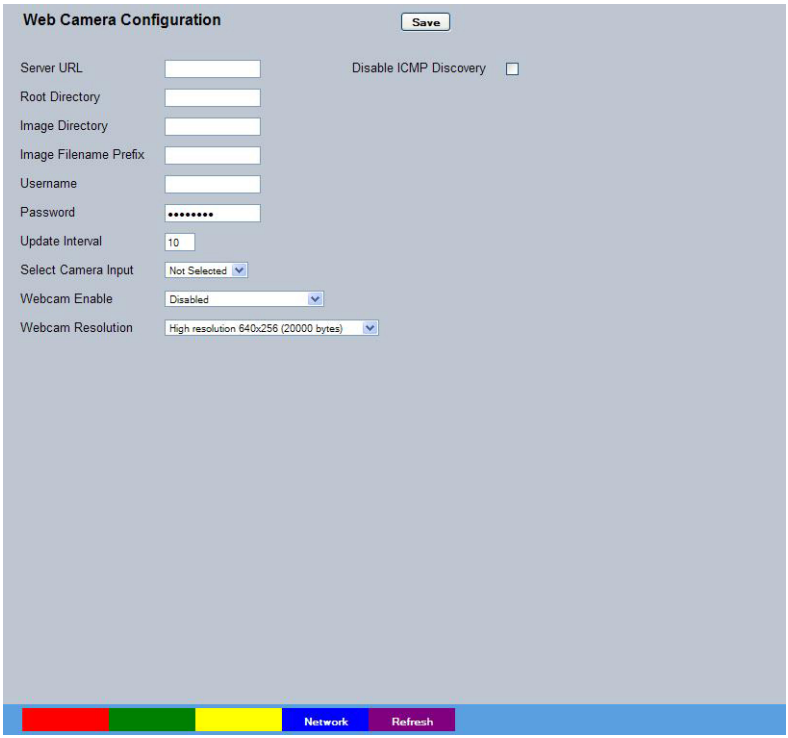
Web Cam

Any of the video inputs on the unit can be made available for transmission to a webserver via a designated webcam server. These images can then be incorporated into a web page and accessed via a standard web browser.

Note: *This menu will only be displayed if 'Webcam Support' is selected in the System Settings->Features menu.*



Server URL	This is the IP address, URL or Domain Name of the WEBCAM Server. Images will be uploaded from the unit to this server at specified time intervals.
Disable ICMP Discovery	When enabled, the unit will not attempt to 'Ping' the configured webserver but will begin immediate data transfer.
Root Directory	This is the main/root directory on the webcam server where the image directory will be located.
Image Directory	This directory will be created when the initial image is uploaded to the webcam server, it is the directory where all images will be saved on the server.
Image Filename Prefix	This is an identifier for images sent from the unit and will be stored as a prefix to the file name.

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Username	If it is necessary to use an authentication process to access the webcam server, enter the relevant username here.
Password	If it is necessary to use an authentication process to access the webcam server, enter the relevant password here.
Update Interval	This is the minimum update interval between each image transmitted from the unit.
Select Camera Input	This allows individual video inputs to be enabled for upload to the webcam server.
Webcam Enable	The Web Cam function can be: ‘Always Enabled’, ‘Enabled when system SET’, ‘Enabled when system UNSET’ or ‘Disabled’.
Webcam Resolution	Select a High, Medium or Low webcam resolution settings to best match the monitor settings of the operator receiving the images.
Network (Blue)	Opens the Network->Network page.
Refresh (Purple)	Refreshes the information on the current page.

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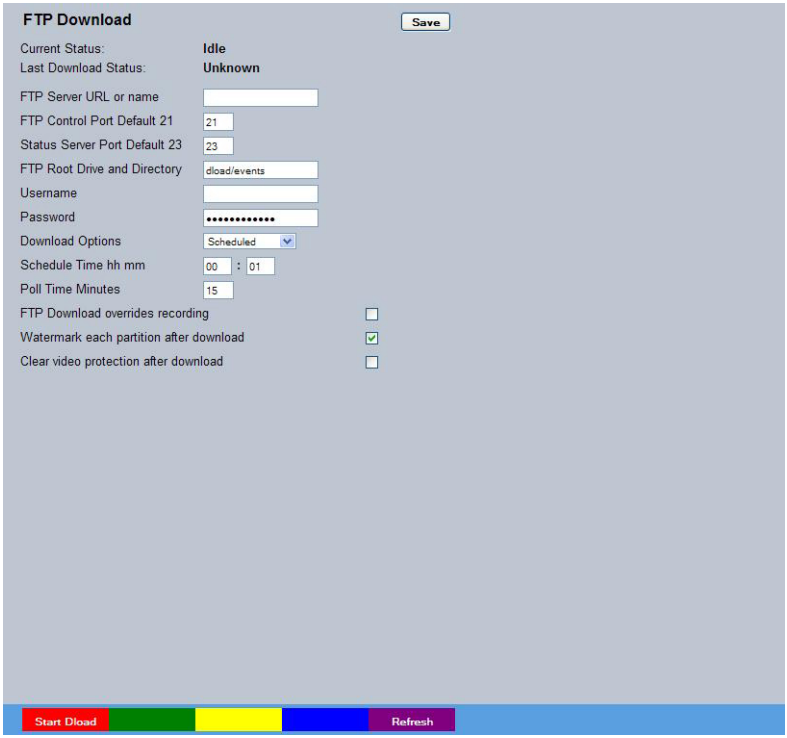
FTP Download

The unit can archive images to a central FTP (File Transfer Protocol) server. This could be on receipt of an alarm, activation of the Activity Detection or at a scheduled time to backup recorded video. Using FTP in a multi-unit application ensures that all files are stored in one central location for each of the units, offering efficient file management and easy review capabilities.



FTP Server IP URL or name	This is the IP address, URL or name of the FTP server the unit will connect to for FTP image download purposes.
FTP Control Port	The default port for FTP use is port 21. If this port has already been allocated on the network, it is possible to identify and allocate an alternative port.
Status Server Port Default	The default port for the Server Status function is port 23, if this port has already been allocated on the network, it is possible to identify and allocate an alternative port number.
FTP Root Drive and Directory	This is the directory where the images are to be stored, it is recommended that a name associated with the unit be used for ease of retrieval.
Username	If it is necessary to use an authentication process to access the FTP server, enter the relevant username here.
Password	If it is necessary to use an authentication process to access the FTP server, enter the relevant password here.

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Download options	Select one of the following options from the drop down menu: On Connection This will automatically start the Archive download when the unit detects the archive destination is present. Scheduled It is possible to force the unit to archive images at a scheduled time, enter a time to activate this function each day. Polled This will set the unit to activate archive download at regular intervals, the time is in minutes and is the period between the end of one archive download and the start of the next. Manual only The archive process will only commence when the user initiates the action.
Schedule time hh mm	If 'Scheduled' has been selected in Download Options, enter a time for the download to take place each day.
Poll time Minutes	If 'Polled' has been selected in Download Options, enter the number of minutes which will elapse between the conclusion of one archive download and the start of the next.
Watermark each partition	This enables a watermark to be generated and stored in a text file downloaded with the video to the FTP server (for each image partition). This watermark is logged in the log file.
Clear video protection after download	This automatically clears the image protection from successfully downloaded images.
Start Download (Red)	Begins the configured download
Refresh(Purple)	Refreshes the current page

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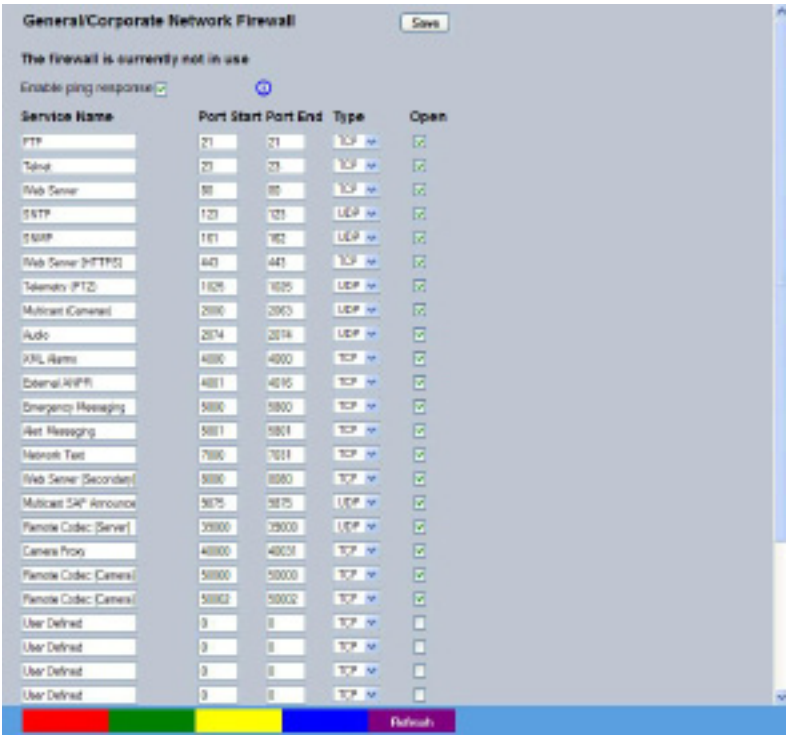
Firewall

This page allows configuration of the on-board firewall. The top ports are pre-configured with typical settings that can be edited, there are user defined ports available at the bottom of the list. Preconfigured ports can be disabled by unchecking the 'open' box.



Enable PING response	By default this option is enabled and allows the unit to be pinged. Disabling this option will make the unit less visible on the network
Table Entry	Up to 32 Configuration settings may be entered.
Service Name	Details the assigned name of the service using the opened port on the firewall.
Port Start	Displays the start of the port range used by the service
Port End	Displays the end of the port range used by the service

***Note:** To open a single port, enter the same number in the Port Start and Port End boxes.*

Type	Displays the type of port to open, select from TCP or UDP.
Open	Displays if the port is open or not.
Refresh (Purple)	Refreshes the current page

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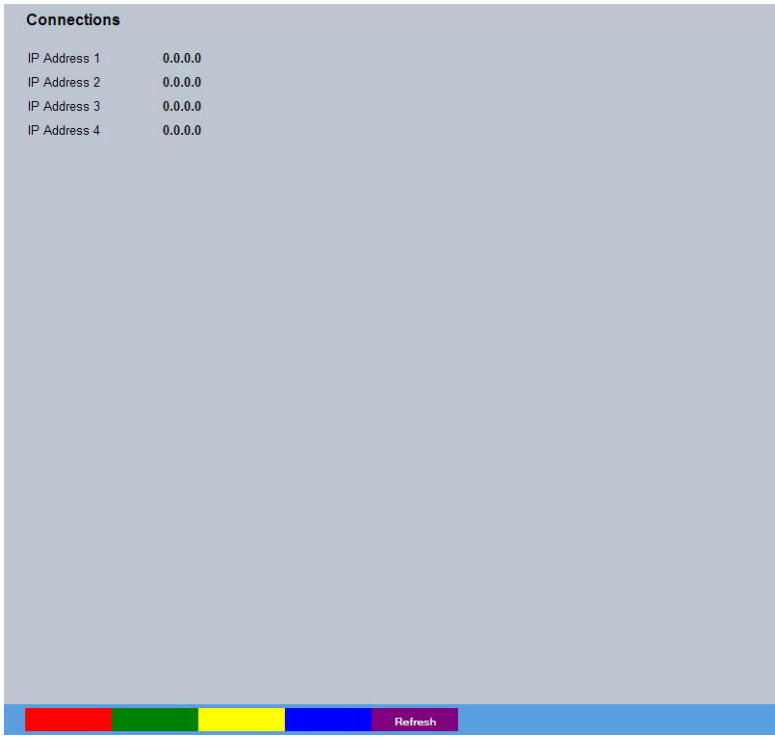
Connections

This page shows the IP addresses of users connected to this unit. It is for information only and cannot be edited or configured.



Refresh (Purple)	Refreshes the current page

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Features & Text

The Analytics and Text menus allow configuration of the unit's text in image and keywords functionality. Refer to the individual menus for further details.

The unit is **Analytics***Capable. Please call Dedicated Micros on + 44 (0) 845 600 9500 for further information on our range of Analytics based solutions.*

The Text In Image page allows the unit to integrate text data with recorded images i.e. a cash register with a camera positioned at the point of sale.

The Keyword page can be used in conjunction with the Text in Image function. Keywords can be entered, which when detected, will trigger an alarm. Up to 30 keywords can be created.

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Features

Dedicated Micros has created a range of analytics components and solutions designed to work with AnalyticsCapable products. The range of applications include: Automatic Number Plate Recognition (ANPR), Object Left and Removed, Access Control, People Counting and Perimeter Protection.

- *For further information regarding the range of Dedicated Micros Analytics solutions, please call: + 44 (0) 845 600 9500*

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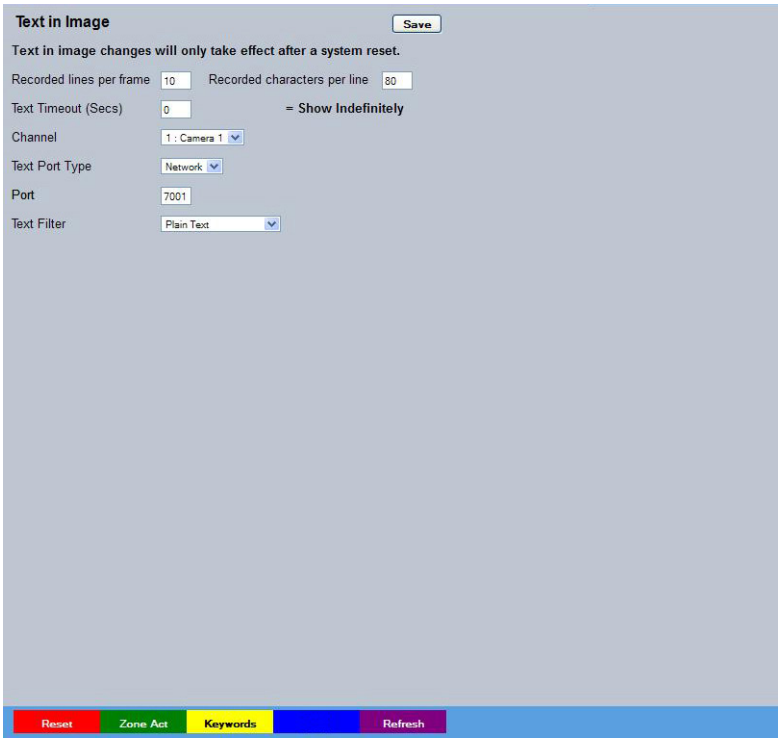
Text In Image

It is possible to integrate the unit into a system were text information can be stored with relevant images for review. This would be most useful in a Retail or Finance application were text data originating from a cash register could be displayed in real time with the video images of the same Point of Sale.

Note: *This menu will only be displayed if 'Text in Image' is selected in the System Settings->Features menu.*



Recorded lines per frame	This controls how many lines of text are stored on the server, and not how many are displayed on screen. This allows more data to be saved than is shown.
Recorded characters per line	Controls the width of the lines displayed on screen.
Text Timeout	This setting controls how long, in seconds, the text is shown onscreen (selecting 0 will show the text indefinitely).
Channel	Select the camera input for configuration from the drop down list.
Text Port Type	Select the input source for Text in Image data. Select 'Off' to switch the function off or 'Network to use the unit's Network port
Text Filter	Select the text filter option from the drop down list. The options are: Plain Text (default), RAW, EPSON, Laserjet, DM POS Receipt, DM POS Journal, TVC-1066

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Enable Keywords	This enables or disables the Keyword feature, allowing the unit to treat certain pre-programmed words received via the text stream as event triggers, refer to 'Keywords' for guidance on creating Keyword triggers.
Keywords pulse extension	This time period allows multiple instances of a word received within a period of time to be treated as a single event (i.e. if a configured Keyword is detected again within the first Keyword's pulse extension period, the second (and following) occurrences of the word will be ignored).
Reset	Resets the unit to apply changes.
Zone Act (Green)	Opens the Alarm Settings -> Zone Actions page.
Keywords (Yellow)	Opens the Features & Text -> Text -> Keywords page.
Refresh (Purple)	Refreshes the current page

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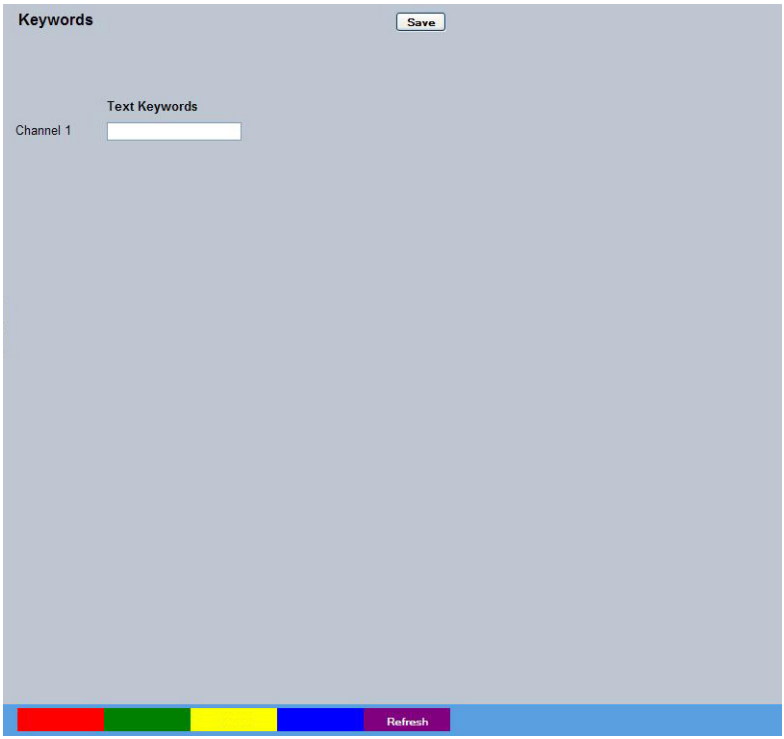
Keywords

This menu allows a specific keyword received via the text stream to be configured and enabled as an event trigger. The 'Enable Keyword' function needs to be activated in the 'Text in Image' menu for this feature to operate.



Text Keyword	The unit can be configured to react to a keyword appearing in text data and treat it as an alarm zone input. In turn this generates events in the event database. The keyword can be up to 20 characters in length. The keyword will be active on the selected Zone keyword channel, *refer to "Zone Input - Input"*.

Note: *Refer to 'Text In Image' for further guidance on integrating text data.*

Refresh (Purple)	Refreshes the current page

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Diagnostics

The Diagnostics menus gives engineers the ability to quickly and accurately diagnose any problems with the unit. This menu will normally only be used on a Technical Support call.

The Debug Parser menus allow detailed analysis of the debug output from the camera and maybe used to assist with fault finding. The debug can be filtered in order to isolate and highlight events that are of interest.

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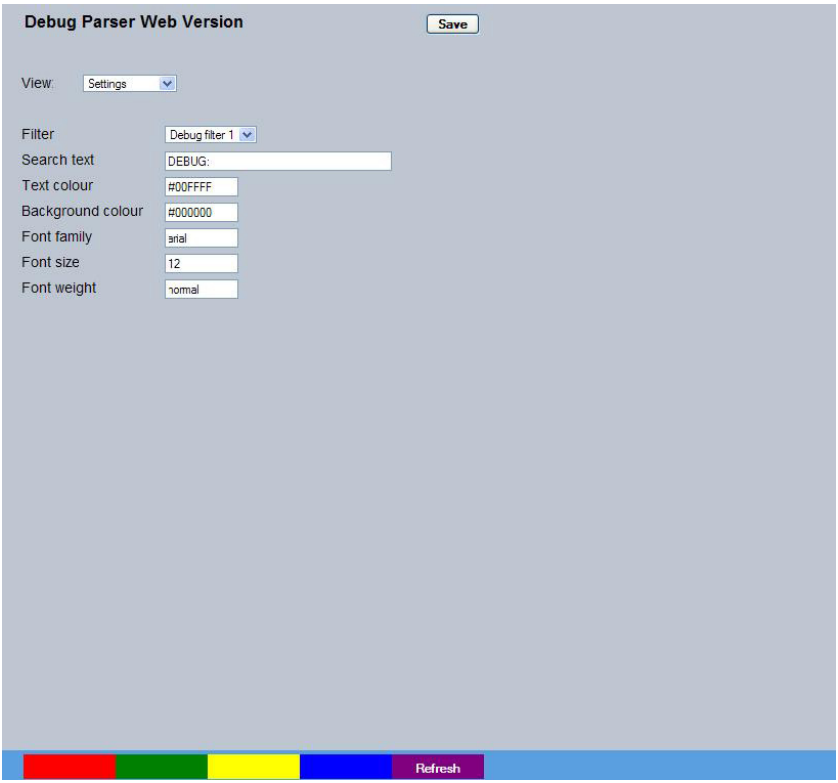
Debug Parser

This menu allow detailed analysis of the debug output from the camera and maybe used to assist with fault finding. The debug can be filtered in order to isolate and highlight events that are of interest.



View	Defines whether the debug settings on the debug output will be displayed.
Filter	Specifies which of the Debug Filters is being configured.
Search text	Specifies the text to be searched for in the Debug stream.
Text colour	Allows configuration of the parser window font colour.
Background colour	Allows configuration of the parser window background.
Font family	Allows the display font family to be specified.
Font size	Allows the display font size to be specified.
Font weight	Allows the display font weight to be specified.
Refresh (Purple)	Refreshes the current page

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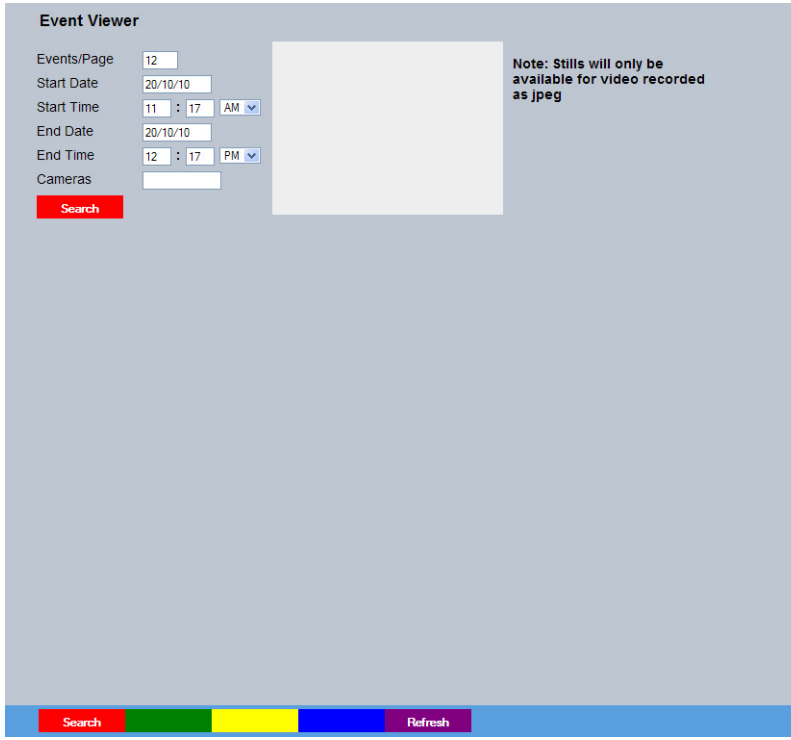
Event Search

The Event Search menu allows recorded event images to be quickly searched for and reviewed. The Search criteria can be limited to a specific date/time and/or individual cameras.

Note: *Event Search will only be available when the 'Enable Event Search Page' option is enabled via the System Settings->Features menu.*



Event/Page	Select the amount of events. Still images (thumbnail size) to be displayed per results page.
Start Date	Enter a Start Date for the Event Search.
Start Time	Enter a Start Time for the Event Search.
End Date	Enter an End Date for the Event Search.
End Time	Enter an End Time for the Event Search.
Cameras	Select the camera channel(s) to be included in the Event Search. A range of cameras can be selected by entering a hyphen between the first and last required camera i.e.1-8. A selection of individual cameras can be chosen by entering a comma between each camera i.e. 1,3,5,8. Events captured by cameras not in this selection will be ignored. There is only one camera available.
Search (Red)	When the Event Search parameters have been entered, select 'Search'.

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Event Search Results

After selecting 'Search' (Red), a still image of each captured event (within the chosen search criteria) will be displayed. It may be necessary to scroll through the results pages to view all events. If the number of events exceeds the events displayed per page (configured in Event/Page).

Click on the thumbnail image to playback an event. That event will then playback in the window at the top of the menu.

Note: *To zoom into the event currently in playback mode, right click it with the mouse. The 'Set Zoom Level' option will be displayed. The image can be set to display at up to 800% of its recorded size. Note that the view window will not increase in size, use the scroll bars to navigate the enlarged image.*

IMPORTANT: *Still event images will only be available for video recorded in JPEG mode (MPEG4 thumbnail Stills will appear 'blank'); however event data recorded in either JPEG or MPEG4 mode can be replayed.*

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Unit Operation

The unit can be operated via the Viewer menus and the enclosed IR Remote Control, the optional keyboard or with a USB mouse. They can also be viewed and accessed remotely via the webpages and the 'Viewer' menu option.

Operating the Viewer

Navigation is via a colour coded softkey system. The coloured menu provides an intuitive approach to operator and installer use. The coloured keys on the IR Remote Control correspond to the menu options displayed on screen.

Note: *The screen images shown throughout this section are those displayed on a local monitor. If viewing remotely via the webpages, the menu layout will differ slightly.*

The function of the keys will change according to whether the unit is in Live or Playback mode.

Overleaf are described the available Viewer menu pages. To display the colour coded menu options, press the OK button on the IR Remote Control or click the mouse button.

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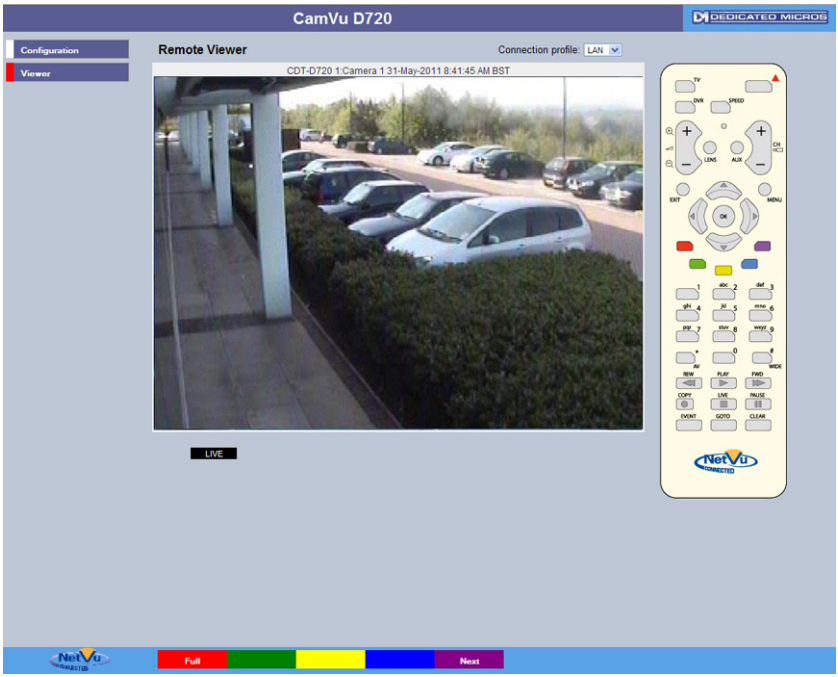
View Control

The View Control page allows the camera to be displayed full screen.



Red	Full	Show currently selected camera full screen.
Purple	Next	Opens the next page of the Viewer menu.

Note: *For information on creating Camera Selection maps. Refer to the Display Setting->Map Config' section for further information.*

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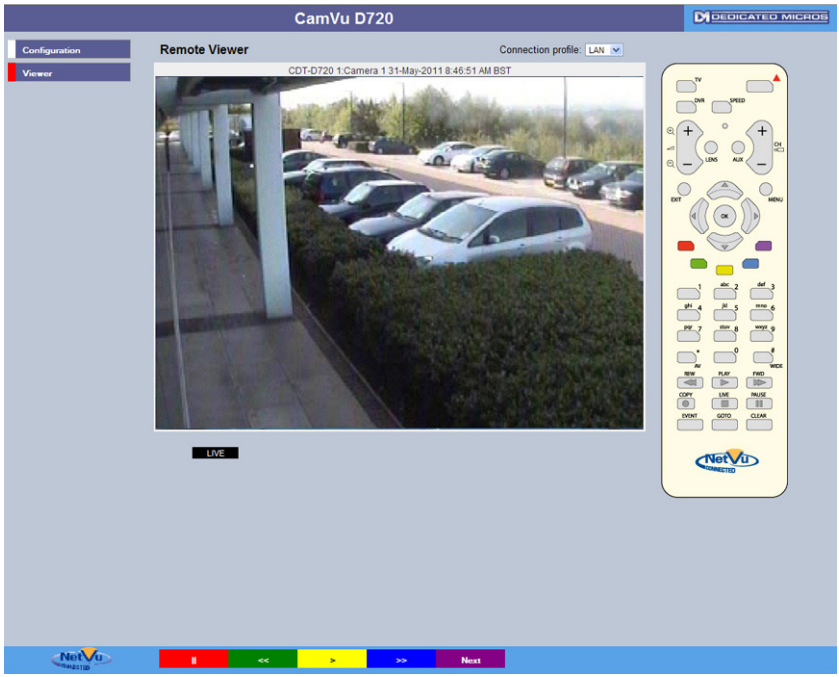
Video Control

The Video Control page offers video playback functions i.e. play, pause, rewind and fast forward.



Red	II	Freezes current video display.
Green	<<	Rewinds current video.
Yellow	>	Plays from current position.
Blue	>>	Fast forwards video up to current recording position.
Purple	Next	Opens the next page of the Viewer menu.

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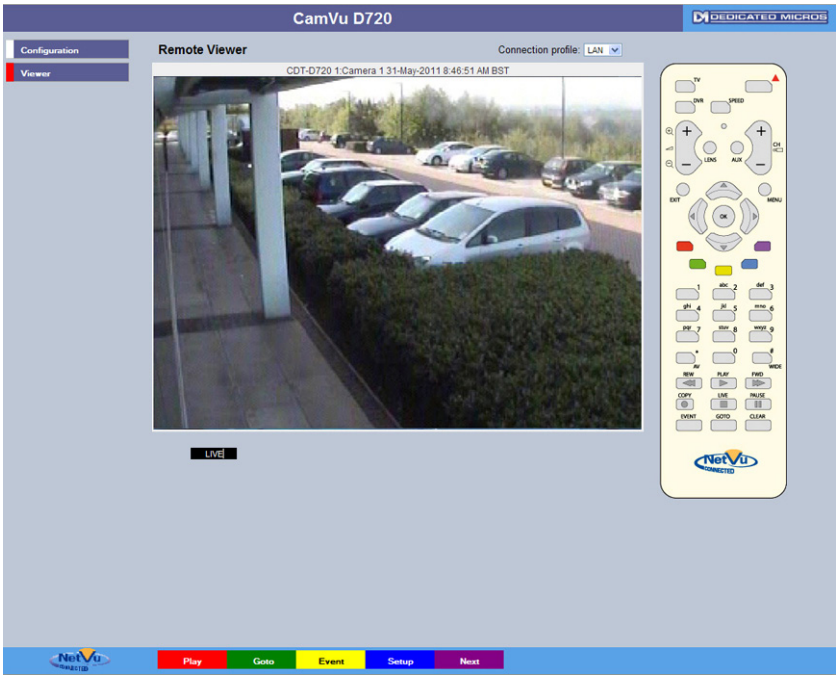
Selection Page

The Selection page allows access to various image and event playback functions.



Red	Play	Switches the selected camera(s) shown onscreen into Play mode.
Green	Goto	Opens the Goto menu.
Yellow	Event	Displays the Events menu.
Blue	Setup	Opens the Configuration menu pages.
IMPORTANT:	*Selecting this option will exit the Viewer menus. This will be logged in the User Activity Log as the current user terminating the session, refer to 'Appendix C' for further information regarding the User Activity Log.*	
Purple	Next	Opens the next page of the Viewer menu.

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Goto Menu

Timeline Navigation

The Timeline Navigation page and the accompanying Video Timeline feature allows quick and easy investigation of recorded video data. The Goto button opens the initial Timeline Navigation page.

Softkeys

The coloured softkey options will change depending on the scale used to review the recorded images. In the above example:

- Selecting the 15 Mins (Red) button will change the softkey options to 15 minute segments i.e. the user can progress 15 mins from/prior the current playback time.
- Selecting the -Hour button (Green) will progress the video to a point exactly one hour prior to the time shown in the date/time display.
- Selecting the +Hour button (Yellow) will progress the video to a point exactly one hour in advance of the ime shown in the date/time display.
- Selecting the 4Hrs (Blue) button will change the softkey options to four hour segments i.e. the user can progress four hours from/prior the current playback time.
- Selecting the Exit (Purple) button will always exit the Timeline Navigation menu.

Note: *Depending on the scale used to review the video i.e. Seconds, Minutes, Hours, or Days; the above softkey options will differ, however the same intuitive principles remain.*

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Video Timeline

The Video Timeline allows intuitive, rapid navigation within recorded video. To aid navigation, the timeline can be set to display periods ranging from 15 seconds to four weeks. The timeline can be clicked anywhere in the scale to instantly play recorded images from that point.

Date/Time Display (Grey) — Shows the currently selected date/time.

Note: *The Date/Time Display shows the last time selected via the timeline. During playback, the Date/Time Display remains static while the 'running' time is shown in the bottom left corner of the playback image.*

Timeline

The timeline allows navigation from the time and date currently shown in the Date/Time Display window. The scale changes to correspond to the time period chosen for investigation i.e. if a scale of one hour is selected it will be possible to move up to one hour prior, or one hour in advance of the displayed time (unless that selected time has not been recorded yet). For example, with a scale of one hour, click '10' on the left side of the timeline to play video from 10 minutes prior to the Date/Time Display. To advance in time, click on the right side of the timeline.

Time Scale Options

- 15 seconds
- 1 minute
- 15 minutes
- 1 hour
- 4 hours
- 1 day
- 1 week
- 4 week

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Change Scale

Utilise the buttons shown below to change the scale.

Note: *The coloured softkey buttons can also be used to alter the scale, refer to "Softkey Guidance" for further details).*

Decrease Scale button (Red)		Decreases the scale of the displayed timeline by one step i.e. if the scale is currently one hour, selecting this button will reduce it to 15 minutes, selecting it again will reduce it to one minute etc.
Increase Scale button (Blue)		Increases the scale of the timeline by one step i.e. if the scale is currently one hour, selecting this button will increase it to four hours, selecting it again will increase it to one day etc.
Left Navigation Arrow (Green)		Selecting the left navigation arrow will play recorded images from the maximum prior time available via the current timeline i.e. if a one hour time scale is displayed, selecting the Left Navigation Arrow will play video from one hour prior. This can also be selected via the Green softkey button.
Right Navigation Arrow (Yellow)		Selecting the right navigation arrow will play recorded images from the maximum future time available via the current timeline i.e. if a one hour time scale is displayed, selecting the Right Navigation Arrow will play video from one hour in advance. This can also be selected via the Yellow softkey button.

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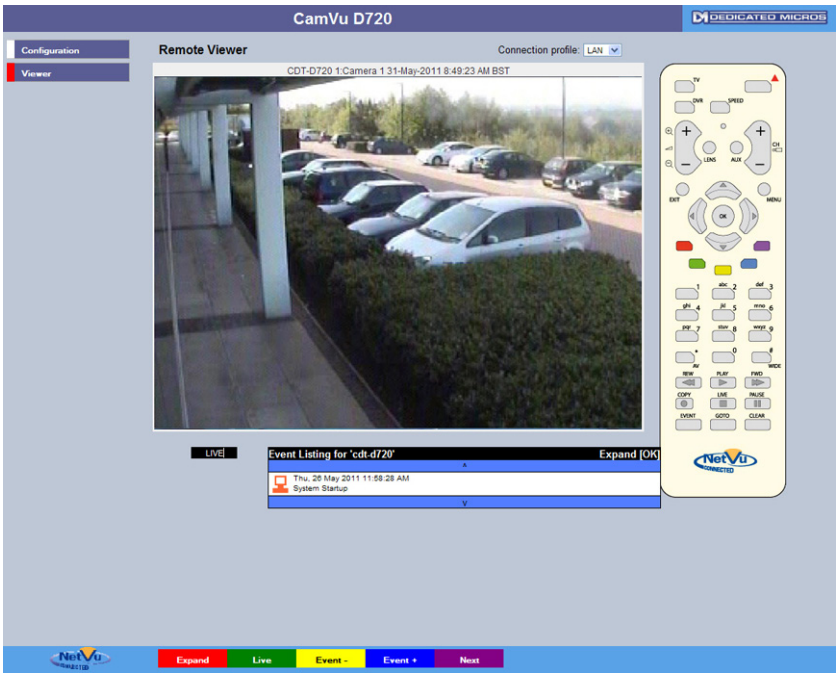
Event List

Alarms and activity detection, plus system Events i.e. camera fails, are tagged and stored in the Event List. Each Event is labelled with an event type (alarm, activity or system) and its time and date. To view any additional pages of Event data, use the Yellow/Blue Softkeys. If viewing locally, use the Up/Down Directional buttons to select a specific Event, press the OK button to display the full list. When viewing remotely, selecting any Event with the mouse will display the full Event list. If viewing locally, press PLAY on the IR Remote Control/Keyboard to playback an event. If viewing remotely, highlight a chosen event with the mouse to playback.



Red	Play	Select to playback the highlighted event.
Green	Live	Select to view live images from the currently selected camera.
Yellow	Page -	Select to display the previous page of Event data.
Blue	Page +	Select to display the next page of Event data.
Purple	Next	Select to open the Event Copy and Search menu.

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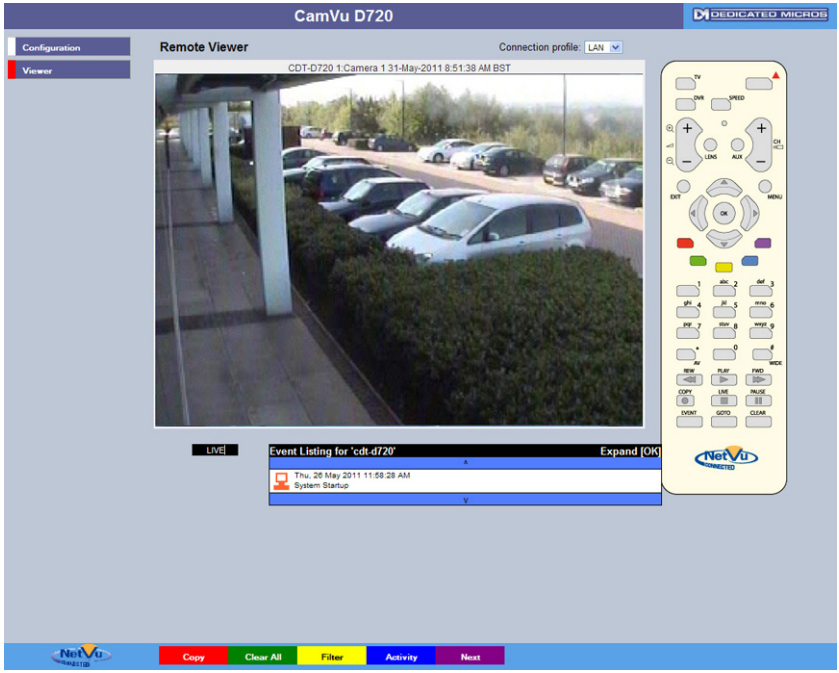
Event Search Menu

The Event Search menu allows events to be searched and filtered by event type. The 'Filter option' allows access to the 'Filter Search' menu.



Red	Blank	Select to remove all data currently displayed in the Filter Search Box.
Green	Clear All	Select to clear ALL events from the copy menu.

Note: *Single events can be deleted via the Copy menu.*

Yellow	Filter	Select to display the Filter Search menu, *refer to; Operating The Viewer->Filter Search for further guidance.*
Blue	Activity	Select to open the Activity Search menu, *refer to; Operating The Viewer->Activity Search for further guidance.*
Purple	Next	Opens the Play menu for the currently selected camera.

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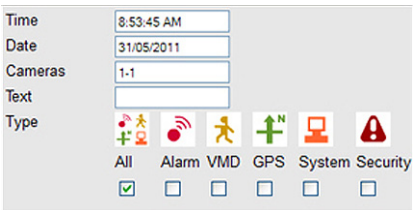
Filter Search Menu

When searching a large number of stored events, the Filter Search menu allows events to be filtered by time, camera channel and category.

Filter Search Box



From Time	Select a start time for the Event filter. Events prior to this time will be ignored.
From Date	Select a start date for the Event filter. Events prior to this date will be ignored.

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	Cameras	Select which cameras are to be included within the Event search. A range of cameras can be selected by entering a hyphen between the first and last required camera i.e.1-8. A selection of individual cameras can be chosen by entering a comma between each camera i.e. 1,3,5,8. Events captured by other cameras will be ignored.
	Text	If searching for text in image events, enter the required text here.
	Type	The event search can be filtered to include all, or specific event types only. The event types are: Alarm, VMD, GPS and System. Each type is assigned a specific symbol, these symbols accompany each listed event for easy recognition.
Red	Blank	Select to remove all data currently displayed in the Filter Search Box.
Green	Reset	Select to reset the Filter Search box. The current Time/Date will be displayed plus all available cameras.
Yellow	Now	Select to enter the current Time/Date. Any additional displayed search criteria will remain.
Blue	Apply	Select to apply any changes made to the Filter Search box.
Purple	Close	Select to return to the Event Copy and Search menu.

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Activity Search Menu

The Activity Search menu allows the search criteria to be further narrowed to only include events which have occured within specific segments of the camera view. Firstly, enter a start/end Time and Date, then select a camera channel. Use the Grid option to select a specific segment of the camera view.

	From Time	Select a start time for the Activity filter. Events prior to this time will be ignored.
	From Date	Select a start date for the Activity filter. Events prior to this date will be ignored.
	To Time	Select an end time for the Activity filter. Events after this time will be ignored.
	To Date	Select a end date for the Activity filter. Events after this date will be ignored
	Cameras	Select which camera to include within the Activity search. A range of cameras can be selected by entering a hyphen between the first and last required camera i.e.1-8. A selection of individual cameras can be chosen by entering a comma between each camera i.e. 1,3,5,8. Events captured by other cameras will be ignored.
Red	Blank	Select to remove all data currently displayed in the Filter Search Box.

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Green	Reset	Select to reset the Filter Search box. The current Time/Date will be displayed plus all available cameras.
Yellow	Grid	Select to open the Grid menu.
Blue	Apply	Select to apply any change made to the Filter Search box.
Purple	Close	Select to return to the Event Copy and Search menu.

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Activity Grid Menu

The Activity Grid menu allows the event search criteria to be further narrowed to only display events which have occured within a segment of the camera view. A grid will be displayed across the image of the selected camera channel. Using the options outlined below, the grid can be configured to create activity zones within the image. Only events which have occured within these zones will then be displayed in the Activity Search menu for the chosen camera channel.

Red	All	This option will display a default rectangle of 18x16 cells across the video image.
Green	None	This option will delete all cells from the displayed video image.

A zone can be created directly via the mouse. Click on a cell and then on a separate cell. The area to be included in the Activity zone will be created linking these points.

IMPORTANT: *The area (cells) highlighted yellow constitutes the activity detection zone. Any activity events occuring within the area created using the Start and and End points will be ignored.*

Note: *Multiple zones can be created within the same camera view.*

Purple	Finish	Select to return to the Activity Search menu.

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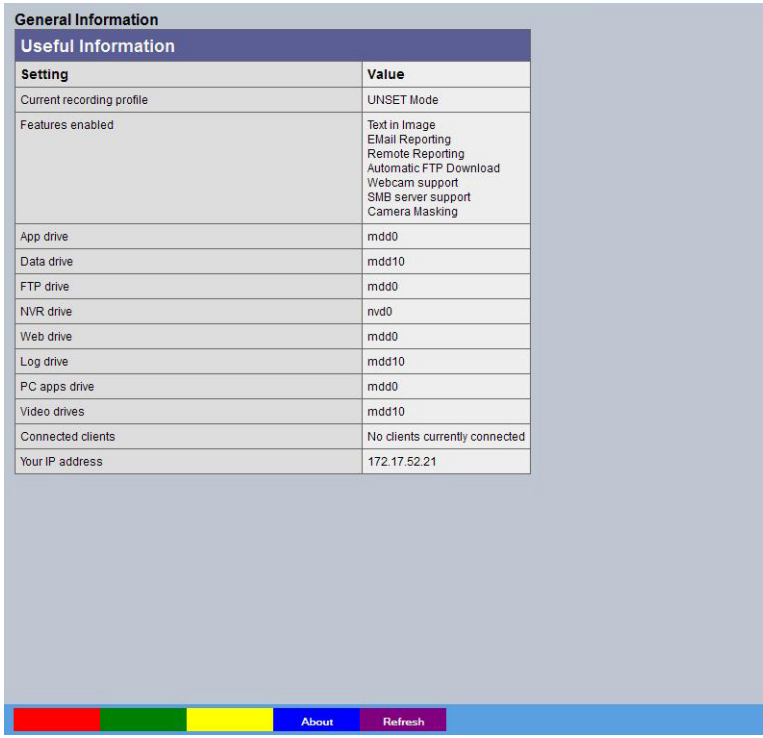
Appendix A - About Pages

General Information

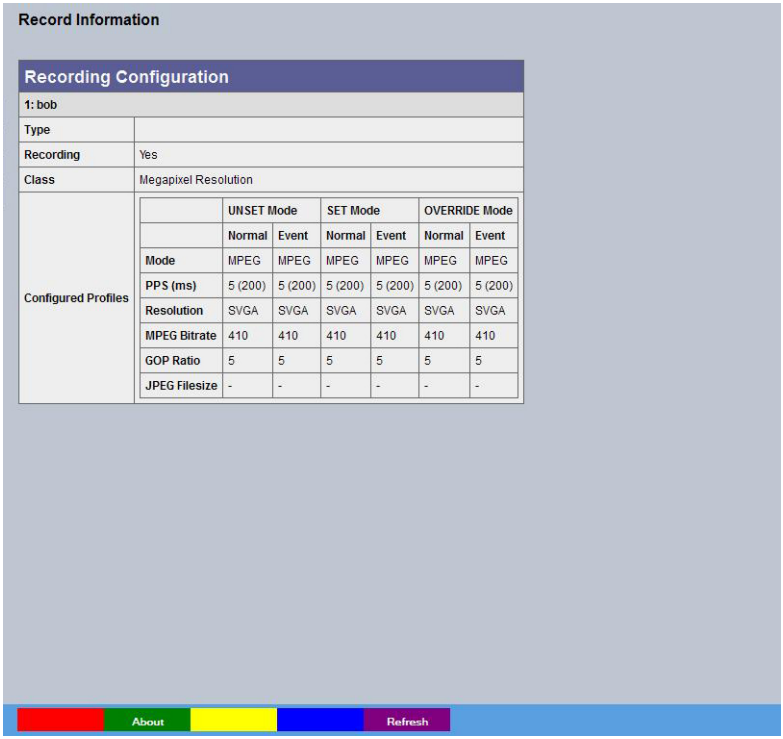
This page gives an overview of the units current settings including IP address, connections to the camera, the locations that data is being read from and written to, and which recording profile is active.



About (Blue)	Opens the *About* page
Refresh (Purple)	Refreshes the current page

Record Details

This page displays the configured recording settings for the unit. The current record mode being used by the unit can be found on the General Information page.



About (Blue)	Opens the *About* page
Refresh (Purple)	Refreshes the current page

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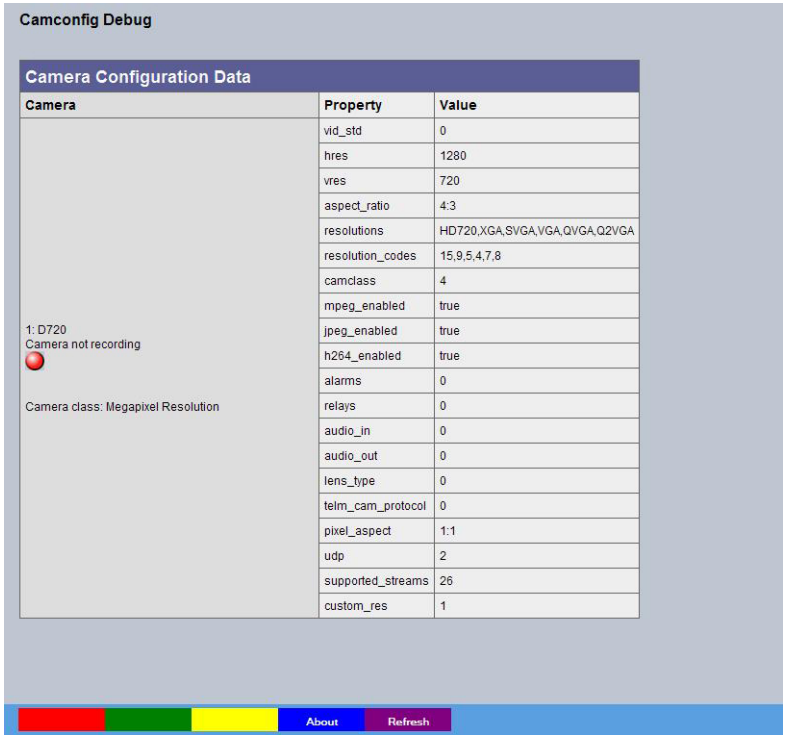
Camconfig Details

This page displays the capabilities of the camera in terms of resolution and supported compression formats. This camera does not support audio, alarms, relay or lens de-warping so all these parameters return 0.



About (Blue)	Opens the *About* page
Refresh (Purple)	Refreshes the current page

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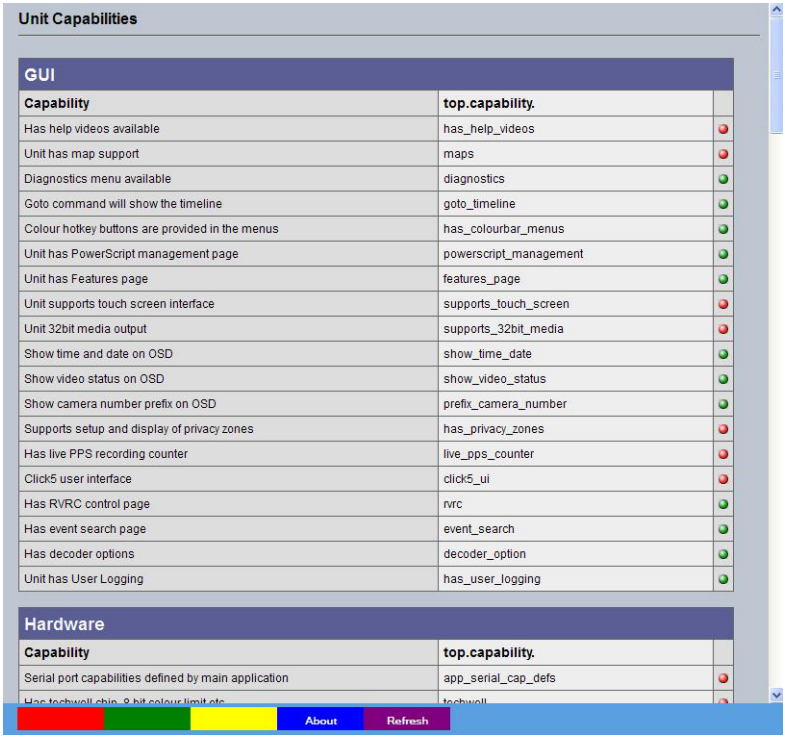
Capabilities

This information page shows the capability settings for the camera. These parameters determine how the camera performs and what options are available on the configuration pages.



About (Blue) — Opens the *About* page

Refresh (Purple) — Refreshes the current page

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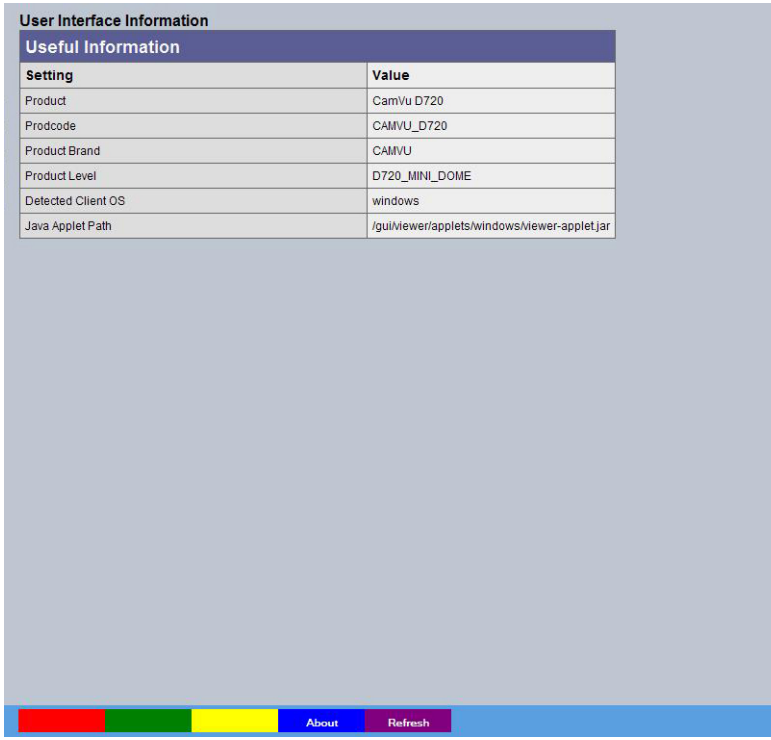
UI Information

The UI page shows the settings stored in the camera which configure the user interface.



About (Blue)	Opens the *About* page
Refresh (Purple)	Refreshes the current page

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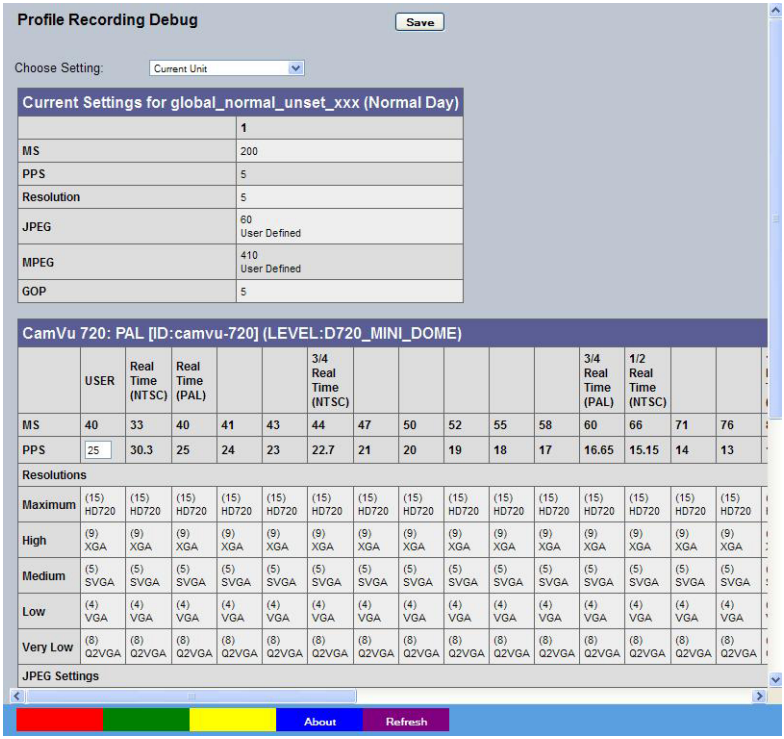
Profile Record Tables

This page shows the different settings available in the record configurations. The current default settings are indicated by crosses.



Profile Recording Debug Save

Choose Setting: Current Unit

Current Settings for global_normal_unset_xxx (Normal Day)

	1
MS	200
PPS	5
Resolution	5
JPEG	60 User Defined
MPEG	410 User Defined
GOP	5

CamVu 720: PAL [ID:camvu-720] (LEVEL:D720_MINI_DOME)

	USER	Real Time (NTSC)	Real Time (PAL)			3/4 Real Time (NTSC)						3/4 Real Time (PAL)	1/2 Real Time (NTSC)		
MS	40	33	40	41	43	44	47	50	52	55	58	60	66	71	76
PPS	25	30.3	25	24	23	22.7	21	20	19	18	17	16.65	15.15	14	13
Resolutions															
Maximum	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720	(15) HD720
High	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA	(9) XGA
Medium	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA	(5) SVGA
Low	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA	(4) VGA
Very Low	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA	(8) Q2VGA
JPEG Settings															

About Refresh

About (Blue)	Opens the *About* page
Refresh (Purple)	Refreshes the current page

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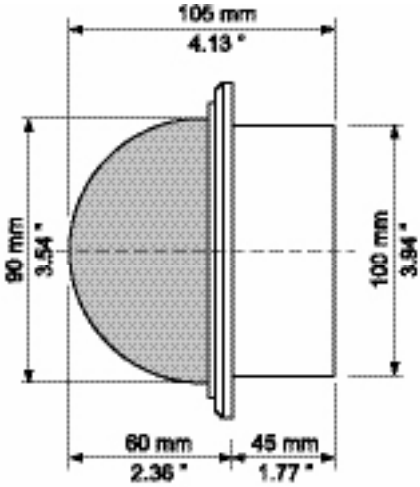
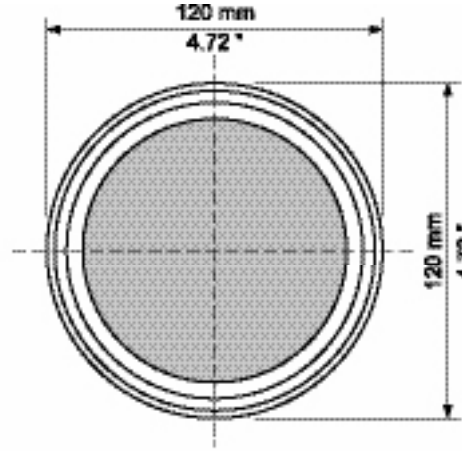
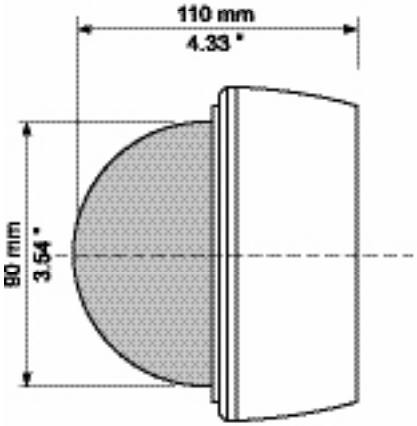
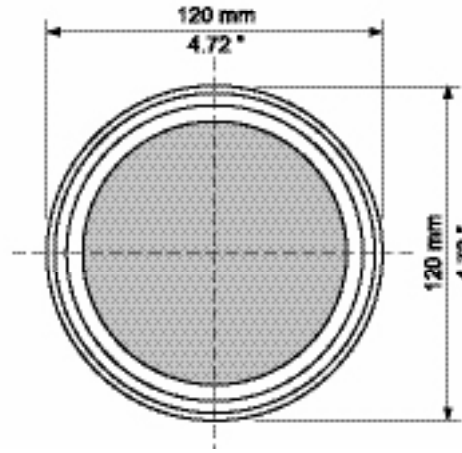
Appendix B - Dimensions









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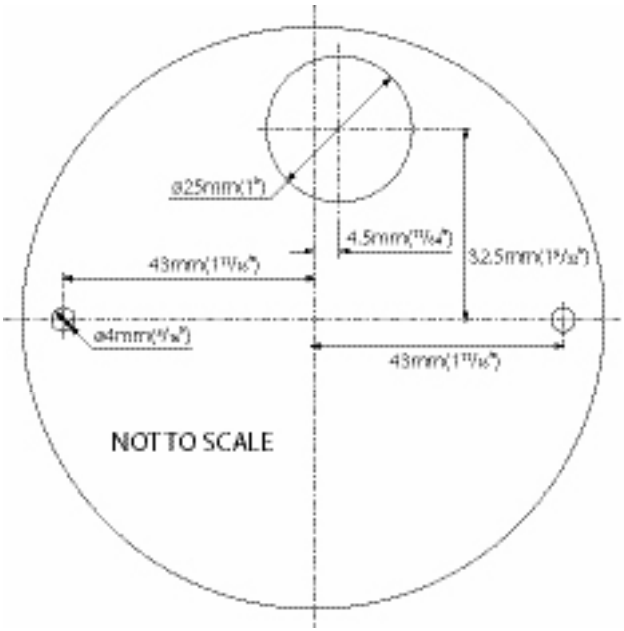
Appendix C - Template



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Appendix D - Specification

IMAGE SENSOR : 1/3" CMOS progressive scan

VIDEO PROCESSOR : SoC DSP (CW5631)

MINIMUM ILLUMINATION (all using frame integration) Comparable sensitivity at 10pps - 2.85 lux
CMVU720: 0.3 lux at F1.2, **CMVUD720:** 0.3 lux at F1.3, **CMVUVRD720:** 0.3 lux at F1.3
SHUTTER TIME : 1/100s to 1/1s

LENS
CMVU720: C/CS with back focus adjustment ring. Direct drive DC iris via 4-pin square type socket on the side of the camera. 1/3" or 1/4" lenses can be used (1/4" ideal for 720p resolutions) **CMVUD720/CMVUVRD720:** Integrated 3-10mm Varifocal with DC iris, F1.3. Aspherical glass with IR corrective coating

VIDEO SPECIFICATIONS

COMPRESSION : JPEG, H.264 and MPEG-4.

MAXIMUM OUTPUT RESOLUTION : 720p (16:9 Ratio), 2MP (4:3 Ratio)

MAXIMUM IMAGE RATE
Maximum 30pps @ 800x600px (single connection to camera) 15pps at up to 1600x1200 (4:3, 2MP) & 1280x720 (16:9, 1MP)

IMAGE STREAMING
Multiple, simultaneous, individual video streams in any supported compression format, bit rate or resolution can be sent to any connected user

TRANSCODING
Transmit multiple simultaneous MPEG-4, H.264 and/or MJPEG recorded image streams to any number of associated NetVu Connected devices for image viewing. Each stream can be tailored to suit bandwidth requirements. Resolution and format can be dynamically changed without the need to stop and then restart the stream. This operation is carried out independently of high resolution recordings.

COMPOSITE VIDEO OUTPUT
(PAL / NTSC) live display, initially operational for 10 minutes (user configurable) to enable camera focusing / configuration. Video output can also be used as part of a media display or emergency messaging capability.

INTEGRATED CAMERA RECORDING (ICR)
ICR combines recording capability and a full enterprise video server within the camera. Record camera footage at the unit as well as any associated Video Server. An integrated Micro SD expansion port provides local recording capability whilst ATA over Ethernet (AoE) protocol provides highly-secure point-to-point transfer of video files to separate, remote, storage devices for backup and longterm archiving. Enables a tiered storage architecture that ensures no single point of failure.

IMAGE CONTROL
Camera Title, Lens Select, AWB, Electronic Iris, Exposure Level, Flip/Mirror Video, Sharpness Control

NETWORK & CONFIGURATION SPECIFICATIONS

NETWORK SUPPORT
DCCP, DHCP, HTTP, HTTPS, IPv4, SMTP, Bonjour, ICMP, DNS, NTP, TCP, UPP, UDP, ICMP, DHCP, ARP, RTP, Telnet, FTP, AoE, SNMP, ZeroConf

WEB PAGE CONFIGURATION
Simple Web page configuration will allow the following functions to be configured: Camera setup, Manual update of viewing profiles, Network and Alarm settings (CMVUVRD720 includes Audio Settings)

DIRECT CAMERA CONFIGURATION
Directly configure from the associated NetVu Connected Video Server. In addition, when used within a Closed IPTV system, default settings (such as streaming rate, resolution, aspect ratio, telemetry, lens configuration etc.) can be automatically assigned to the camera

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INTEGRATION SPECIFICATIONS

APPLICATION SUPPORT
Browser: IE 5.5 / Firefox 2.0 and above
Developer: Java via Dedicated Micros SDK

NETVU OBSERVER - SEAMLESS VIDEO MANAGEMENT
Dedicated Micros NetVu ObserVer video management software allows seamless viewing and control of live and recorded images from any NetVu Connected product (IP or analogue) in a single interface. The ability to view multiple sites simultaneously makes management of any security installation efficient. The inclusion of RVRC (ARC) features such as EDP, event characterisation and report generation make NetVu ObserVer ideal for remote monitoring of multiple sites. (Supplied with Product, Apple Mac Version Available)

ALARMS & RELAYS
Video Motion Detection (VMD) & Activity Detection, Zoned alarms based on multiple inputs.
On alarm actions include; Alarm Reporting, Record Profile change, Email, Relay Closure (Relay closure on models with relay outputs only)
CMVUVRD720: 2 physical alarm inputs & 1 physical relay output.

AUDIO

CMVUVRD720: 1x audio input (mono) – 3.5mm jack, 47kΩinput impedance, 1x audio ouput (mono) – 3.5mm jack, 47kΩinput impedance

GENERAL SPECIFICATIONS

ENCLOSURE
CMVU720: Zintec case, Cast Zinc lens mount, V0 ABS trim
CMVUD720: Grey ABS. Clear polycarbonate bubble
CMVUVRD720: IP66 Die cast aluminium LM25 Base, Lexan Polycarbonate Bubble

CONNECTIONS
Ethernet: 10/100 BaseT RJ45 Connector PoE
Storage: Micro SD slot for recording. Supplied with 2GB class 4 card. **CMVU720:** Secondary Micro SD slot for recording
Power: Terminal Block
CMVUVRD720: Terminal Block for Alarms & Relays

MOUNTING OPTIONS
CMVU720: 1/4" 20 UNC mounts on top and bottom
CMVUD720: Ceiling, Surface (via provided fixings), 3-axis GyroView set up
CMVUVRD720: Surface (via provided fixings), 3-axis GyroView set up

MEASUREMENTS
CMVU720: 123 (L) x 60 (H) x 60 (W) (mm)
CMVUD720: 120 (L) x 120 (W) x 110 (H) (mm)
CMVUVRD720: 148 (L) x 148 (W) x 104 (H) (mm)

WEIGHT
CMVU720: 0.4kg (14oz) without lens **CMVUD720:** 0.3kg (10.5oz) **CMVUVRD720:** 1.18kg (41.6oz)

POWER
CMVU720: 12Vdc-24Vac/PoE, Consumption: 4.5W **CMVUD720:** PoE only, Consumption: 4.5W **CMVUVRD720:** 12Vdc/PoE, Consumption: 4.5W

POWER OVER ETHERNET
IEEE 802.3-2008. End span and bridging injectors supported.
Supplied with a PoE injector to allow power to be applied to the connecting Ethernet cable without the need for a PoE enabled network switch. This allows 48V power (supplied seperately) to be provided down the line to the camera on the same cable that is used for data transmission.

ENVIRONMENTAL
Operating Temperature: -10º to +50ºC (14º to 122ºF) Storage Temperature: -10º to +70ºC (14º to 158ºF)
Operating Humidity: 20% to 80% relative humidity, non condensing Storage Humidity: 20% to 90% relative humidity, non condensing

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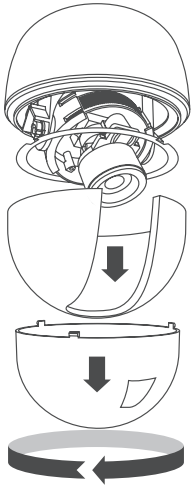
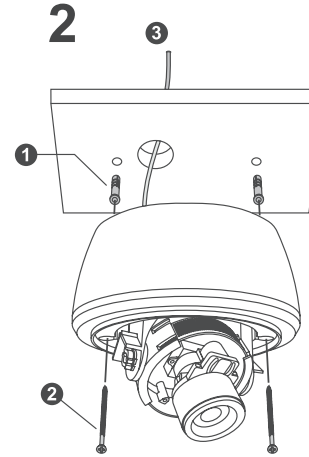
Quickstart

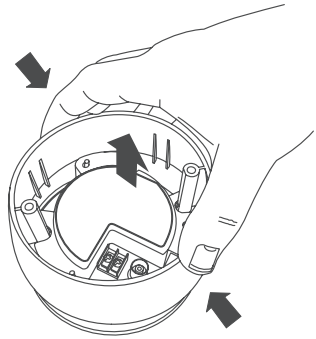
1



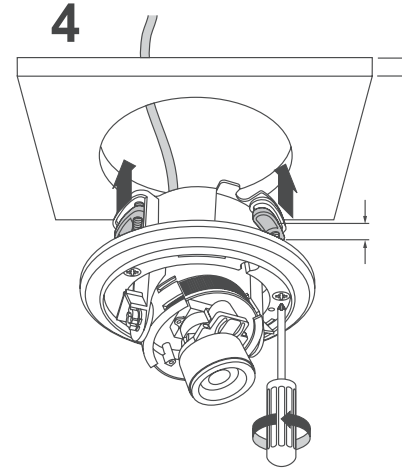
2



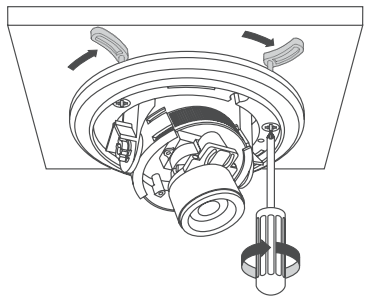
3



4



5



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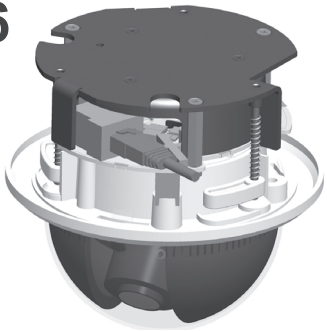
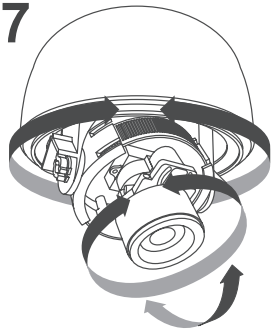
6



7



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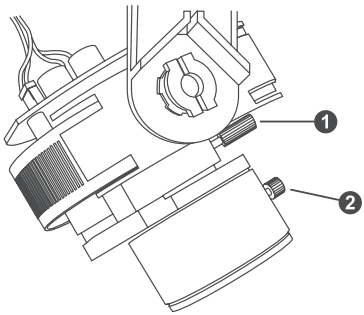

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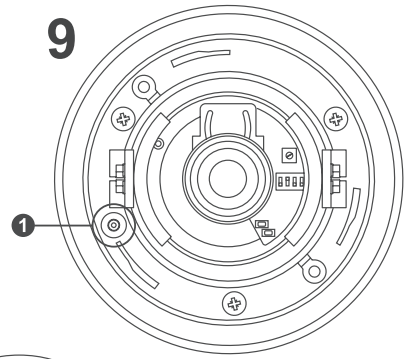

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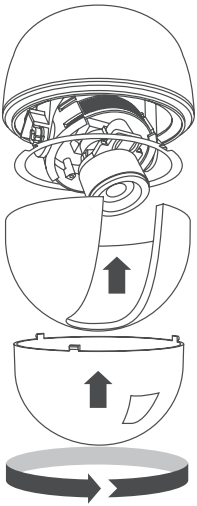

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